# CONSTRUCTION NEWS

Supplement to ENGINEERING NEWS. New York, March 9, 1905.

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## CIVIL SERVICE EXAMINATIONS FOR TECHNICAL POSITIONS.

**Announcement is made in these columns from time to time of civil service examinations for technical positions. In all cases where the examinations are held by the United States Civil Service Commission, further information may be obtained by addressing the Secretary of that board at Washington, D. C.**

APPRENTICE DRAFTSMAN.—U. S. Civil Service Commission will hold an examination March 29, at various places throughout the country to secure eligibles to fill a vacancy in the position of apprentice draftsman at $360 per annum, in the office of the Chief of Ordnance, Washington, D. C., and similar vacancies as they may occur. The age limit is 16 to 20 years. To young men qualifying for appointment the position of apprentice draftsman offers opportunity for a practical education and ultimate advancement to the position of mechanical draftsman.

CEMENT EXPERT.—U. S. Civil Service Commission will hold an examination March 29, at various places throughout the country, to secure eligibles to fill a vacancy in the position of cement expert at $2,400, and another at $1,500 per annum, in the Reclamation Service, Geological Survey, and vacancies as they may occur requiring similar qualifications. For this examination it is essential that applicants have had considerable practical experience either in the manufacture, testing, or use of cements, and no applicant who has not had such experience outside of the undergraduate work of his school or college course will be admitted to the examination.

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## PLANS AND SPECIFICATIONS ON FILE.

**The following Plans (P.), Specifications (S.), and Bidding Sheets (B. S.), may be seen at the office of The Engineering News Publishing Co., 220 Broadway, New York:**

| Bids close | Work. | Place. | On file. | See issue. |
|---|---|---|---|---|
| Mar. | | | | |
| 11 | Fireproof prison | New York, N.Y. | S | 2- 9 |
| 11 | Elec. elevators | Portsm'th, N.H. | S | 2-16 |
| •13 | Stopcock boxes | Cleveland, O. | S. & B. S. | 2-23 |
| •17 | Dredge | St. Louis, Mo | P. & S. | 1-19 |
| •20 | Water-works | Meeker, Colo | S | 3- 9 |
| •28 | Coal pocket, etc. | Atlantic Cy, N.J. | P. & S. | 3- 2 |
| 25 | Electric crane | Portsmouth, N.H. | S | 3- 2 |
| Apr. | | | | |
| 1 | Electric cranes | Portsm'th, N. H. | S | 3- 9 |
| 15 | Electric crane | Puget S'd, Wash. | S | 3- 9 |
| May | | | | |
| •14 | Water-works | Mansfield, La. | S | 2- 2 |

**•Work advertised in Engineering News.**

**NOTE.—We are desirous of securing specifications and bidding sheets (and plans when not too bulky) of pending work for file in our New York office for the benefit of contractors or others who may be interested in the work. If more sets than one are sent us we shall be pleased to distribute these to contractors who ask for them. When the work is advertised in Engineering News a note that the plans are filed with us will be added to the advertisement without cost.**

## LIST OF CONTRACTS PENDING.

Bids close. Work. Place. See issue.

### LIGHT, HEAT AND POWER PLANTS.

Mar. 10. Steam heating plant, Alma, Wis.......... Mar. 9
Mar. 15. Electric plant, Calgary, Alta.......... Mar. 9
Mar. 15. City lighting, New York, N. Y.......... Mar. 9
Mar. 17. Barracks lighting, St. Louis, Mo.......... Mar. 9
Mar. 20. Electric generating plant, Wash., D. C.... Feb. 9
Advertised, Eng. News, Feb. 9.
Mar. 21. City lighting, Norwalk, O.......... Feb. 16
Advertised, Eng. News, Feb. 16.
Mar. 21. Power house, New York, N. Y.......... Mar. 2
Mar. 22. Power plant work, Dayton, O.......... Mar. 9
Mar. 27. Street lighting, Laconia, N. H.......... Mar. 9
Advertised, Eng. News, Mar. 9 and 16.
Mar. 28. Dynamo house, Dover, N. J.......... Mar. 9
Apr. 3. Steam heating plant, Kirkland, Ind.... Mar. 9
Apr. 11. City lighting, Shreveport, La.......... Feb. 16
April 3. Electric lighting, Cape Charles, Va. .... Feb. 23
Apr. 12. Power house, Lockport, Ill.......... Feb. 16
Advertised, Eng. News, Feb. 16.

### BRIDGES.

Mar. 11. Bridge, Richmond, Ind.......... Mar. 9
Mar. 11. Bridge, steel, Elk River, Minn.......... Mar. 9
Mar. 13. Bridges, steel, Topeka, Kan.......... Mar. 9
Mar. 13. Bridge, Fredericton, N. B.......... Mar. 9
Mar. 13. Bridge, San Bernardino, Cal.......... Feb. 9
Mar. 13. Bridges, Lebanon, O.......... Mar. 2
Mar. 15. Bridge, Crawfordsville, Ind. .......... Feb. 23
Mar. 18. Arches, concrete, Des Moines, Ia.......... Mar. 2
Mar. 20. Bridges, Newton, Kan.......... Mar. 9
Mar. 20. Bridge, superstructure, Cleveland, O..... Mar. 9
Mar. 21. Bridges, Central City, Neb.......... Mar. 2
Mar. 22. Bridge, approaches, Greenville, S. C...... Mar. 9
Mar. 23. Bridge, Harrisburg, Pa.......... Mar. 9
Mar. 23. Bridge approach, Washington, D. C. .... Feb. 23
Advertised, Eng. News, Feb. 23 to Mar. 16.
Mar. 25. Bridges, Bentonville, Ark.......... Mar. 2
Mar. 30. Drawbridge, Manistee, Mich.......... Mar. 2
Advertised, Eng. News, Feb. 23 and Mar. 2.
Mar. 30. Bridge, Columbus, O.......... Mar. 9
Mar. 30. Bridge, Providence, R. I.......... Mar. 9
Advertised, Eng. News, Mar. 9 to 30.
Apr. 4. Bridge, steel, Spokane, Wash.......... Mar. 9
Apr. 4. Bridges, steel, Columbus, Ga.......... Mar. 2
April 4. Bridges, Lincoln, Neb. .......... Feb. 23
Apr. 4. Bridge, Goldendale, Wash.......... Feb. 9
Apr. 6. Bridge, Wabash, Ind.......... Mar. 2
Apr. 19. Bridges, Moscow, Idaho.......... Mar. 9
May 1. Bridge, Richland Center, Ark.......... Mar. 9
No date. Bridge, steel, London, Ont.......... Mar. 9
No date. Bridges, Bluffton, Ind.......... Mar. 2

### BUILDINGS.

Mar. 9. Jail, New Albany, Miss.......... Mar. 2
Mar. 9. Hospital, Dulce, N. Mex. .......... Feb. 23
Mar. 9. School, Columbia, S. C. .......... Feb. 23
Mar. 9. Court house, Elbow Lake, Minn.......... Feb. 16
Mar. 9. Steam heating, Savannah, Ga.......... Feb. 9
Mar. 10. Wagon shed, Oswego, N. Y.......... Feb. 9
Advertised, Eng. News, Feb. 9 to Mar. 2.
Mar. 10. Military quarters, New Bedford, Mass. .. Feb. 23
Mar. 10. Bakery (mfg. pl.), Jefferson Barracks, Mo. Feb. 23
Mar. 10. Building plans, Macon Ga.......... Mar. 2
Mar. 11. Public hall, Newburg Heights, O.......... Feb. 23
Mar. 11. Fireproof prison, New York, N. Y.......... Feb. 9
Mar. 12. Court house, Magnolia, Ark.......... Feb. 9
Mar. 13. Post office, Hammond, Ind.......... Jan. 26
Mar. 13. School annex, Cleveland, O. .......... Feb. 23
Mar. 13. City hall, Oskaloosa, Ia. .......... Feb. 23
Mar. 14. Post office, Moberly, Mo.......... Jan. 26
Mar. 15. Jail equipment, etc., Camden, N. J...... Feb. 2
Advertised, Eng. News, Feb. 2 and 9.
Mar. 15. Y. M. C. A. building, Seattle, Wash. .... Feb. 23
Mar. 15. Plumbing, etc., Cedar Rapids, Ia.......... Mar. 2
Mar. 13. School addition, New Bedford, Mass.... Mar. 9
Mar. 15. Brick school, Spencer, N. Y.......... Mar. 9
Mar. 15. Laundry (Mfg. Pl), Chippewa Falls, Wis.. Mar. 9
Mar. 16. Building additions, New York, N. Y..... Mar. 9
Mar. 17. Academy repairs, etc., Salem, N. Y..... Mar. 9
Mar. 20. Post office, Elizabeth, N. C.......... Feb. 2
Mar. 21. Post office, Laredo, Tex.......... Feb. 2
Advertised, Eng. News, Feb. 2 and 9.
Mar. 21. Armory, Rochester, N. Y. .......... Feb. 23
Mar. 21. Station and power house, New York, N. Y. Mar. 2
Mar. 22. Plumbing, Grand Haven, Mich.......... Mar. 9
Mar. 23. School, Baton Rouge, La.......... Mar. 2
Mar. 25. Masonic Temple, New Martinsville, W. Va. Mar. 9
Mar. 27. City hall, Alpena, Mich.......... Mar. 2
Mar. 27. Post office, Lebanon, Pa.......... Feb. 9
Mar. 28. Post office, Superior, Wis.......... Feb. 9
Advertised, Eng. News, Feb. 9 and 16.
Mar. 29. Screens, etc., Delaware City, Del.......... Mar. 9
Advertised, Eng. News, Mar. 9 to 23.
Mar. 30. Heating apparatus, Waterloo, Ia.......... Mar. 9
Apr. 3. Court-house, Kentland, Ind. .......... Feb. 23
Apr. 3. Post-office, Macon, Ga. .......... Feb. 23
Advertised, Eng. News, Feb. 23 to Mar. 2.
Apr. 3. College building, Ithaca, N. Y.......... Mar. 2
Advertised, Eng. News, Mar. 2 to Mar. 16.
Apr. 3. Freight station, Cincinnati, O.......... Mar. 9
Advertised, Eng. News, Mar. 9 and 16.
Mar. 14. Sewer pipe, Winnipeg, Man.......... Mar. 9
Mar. 18. Sewer, Watertown, Wis.......... Mar. 9
Mar. 15. Paving brick, etc., Wheeling, W. Va.... Mar. 9
Apr. 6. Post office, Marblehead, Mass.......... Mar. 2
Apr. 13. Portland cement, Washington, D. C..... Mar. 9
Advertised, Eng. News, Mar. 9 to April 13.
June 15. Court-house plans, New Orleans, La...... Feb. 23

### WATER SUPPLY AND IRRIGATION.

Mar. 10. Water-works, Bishop, Cal. .......... Feb. 23
Advertised, Eng. News, Dec. 8 to Dec. 29.
Mar. 10. Corporation ferrules, Chicago, Ill....... Mar. 2
Mar. 10. Water pipe, etc., Minneapolis, Minn...... Mar. 2
Mar. 11. Water pipe, Rockford, Ill.......... Mar. 9
Mar. 11. Settling well, Lorain, O.......... Feb. 16
Mar. 13. Stopcock boxes, Cleveland, O. .......... Feb. 23
Advertised, Eng. News, Feb. 23.
Mar. 13. Brass goods, pipe fittings, Winnipeg, Man. Mar. 2
Mar. 13. Pipe and laying, Port Townsend, Wash.. Mar. 2
Mar. 13. Pumping plant, Bellingham, Wash....... Mar. 2
Mar. 13. Water pipe, Chico, Cal.......... Mar. 9
Mar. 13. Pumping station, East Toronto, Ont.... Mar. 9
Mar. 15. Tank and Tower, Osborne, Kan. .......... Feb. 23
Mar. 16. Water-works, Callicoon, N. Y. .......... Feb. 23
Advertised, Eng. News, Feb. 23 and Mar. 2.
Mar. 17. Pipe and castings, Cincinnati, O........ Feb. 16
Advertised, Eng. News, Feb. 16 to Mar. 9.
Mar. 18. Water pipe, Washington, D. C.......... Mar. 2
Advertised, Eng. News, Mar. 2.
Mar. 20. Water-works and sewers, North Bay, Ont. Feb. 23
Mar. 20. Water-works, Boyce, La.......... Mar. 2
Mar. 20. Water-works, Meeker, Colo. .......... Feb. 2
Advertised, Eng. News, Feb. 2 to Mar. 16.
Mar. 21. Well, Fort Caswell, N. C.......... Feb. 9
Mar. 21. Pumping engine, Toronto, Ont. .......... Feb. 23
Advertised, Eng. News, Feb. 23 and Mar. 2.
Mar. 21. Water valves, Cleveland, O.......... Mar. 9
Advertised, Eng. News, Mar. 9 and 16.
Mar. 21. Fire hydrants, Cleveland, O.......... Mar. 9
Advertised, Eng. News, Mar. 9 and 16.
Mar. 22. Water-works, sewers, Aberdeen, Miss.... Mar. 9
Advertised, Eng. News, Mar. 9.
Mar. 23. Water-works, electric plant, Alpena, Mich. Mar. 9
Advertised, Eng. News, Mar. 9 and 16.
Mar. 24. Boiler, etc., Port Townsend, Wash...... Mar. 9
Mar. 25. Boiler, pump, etc., Ft. Assinniboine, Mont. Mar. 2
Advertised, Eng. News, Mar. 2 to Mar. 30.
Mar. 29. Distributing system, San Antonio, Tex.. Mar. 9
Apr. 3. Irrigation canals, Cody, Wyo.......... Mar. 9
Apr. 6. Pipe line, etc., Boston, Mass.......... Mar. 9
Advertised, Eng. News, Mar. 9 to Apr. 6.
Apr. 10. Water pipe, Winnipeg, Man.......... Feb. 16
Apr. 12. Water-works, etc., Portage la Prairie, Man. Mar. 9
Advertised, Eng. News, Mar. 9.
Apr. 18. Pumping machinery, New Orleans, La.. Feb. 16
Advertised, Eng. News, Feb. 16 to April 20.
May 14. Water-works, Mansfield, La.......... Mar. 2
Advertised, Eng. News, Mar. 2.
May 15. Pumping engine, Montreal, Que........ Mar. 9
Advertised, Eng. News, Mar. 9.

### SEWERAGE.

Mar. 10. Sewer work, Philadelphia, Pa.......... Mar. 9
Mar. 11. Brick sewer, Des Moines, Ia.......... Mar. 2
Mar. 13. Sewer, Wabash, Ind.......... Mar. 9
Mar. 15. Sewer, Williamsport, Pa.......... Mar. 9
Mar. 1[illegible]. Sewer, Allentown, Pa.......... Mar. 9
Mar. 20. Sewer, Cresco, Ia.......... Mar. 9
Mar. 22. Sewers, Hoboken, N. J.......... Mar. 9
Mar. 29. Sewer, Portsmouth, O.......... Mar. 9
Mar. 29. Sewers, Cincinnati, O.......... Mar. 9
Mar. 29. Sewerage, Ft. McIntosh, Tex.......... Mar. 9
Mar. 31. Sewer system, Salem, Mass.......... Mar. 9
Advertised, Eng. News, Mar. 9 to 23.
Apr. 18. 65 miles sewers, New Orleans, La...... Feb. 16
Advertised, Eng. News, Feb. 16 to April 20.

### STREETS AND ROADS.

Mar. 9. Roads, Bedford, Ind. .......... Feb. 23
Mar. 10. Paving, asphalt, Cincinnati, O. .......... Feb. 23
Mar. 10. Grading, Ventura, Cal.......... Mar. 2
Mar. 11. Streets, Watertown, Wis.......... Mar. 9
Mar. 13. Paving, Indianapolis, Ind.......... Mar. 9
Mar. 13. Roads, Bedford, Ind.......... Mar. 9
Mar. 13. Paving, brick, La Crosse, Wis.......... Mar. 2
Mar. 15. Paving, brick, So. Bend, Ind.......... Mar. 2
Mar. 14. Paving, vitrified brick, Cambridge, O. ... Feb. 23
Mar. 14. Sidewalks, Des Moines, Ia.......... Mar. 9
Mar. 15. Paving, Terre Haute, Ind.......... Mar. 9
Mar. 15. Paving, Tacoma, Wash.......... Mar. 9
Mar. 15. Paving, Elizabeth, N. J. .......... Feb. 23
Mar. 15. Road, gravel, Rensselaer, Ind.......... Mar. 2
Mar. 16. Roads, Bloomfield, Ind.......... Feb. 16
Mar. 16. Paving brick, Brantford, Ont.......... Mar. 9
Mar. 17. Paving, Philadelphia, Pa.......... Mar. 9
Mar. 18. Road, Cincinnati, O.......... Mar. 2
Mar. 20. Paving, Cincinnati, O.......... Mar. 2
Mar. 20. Graveling, Brookville, Ind.......... Mar. 9
Mar. 20. Paving Helena, Mont.......... Mar. 9
Mar. 20. Paving, brick, Clairton, Pa.......... Mar. 9
Mar. 20. Curbing, stone, Augusta, Ga.......... Mar. 9
Mar. 20. Road, gravel, Jacksonville, Fla.......... Mar. 9
Mar. 21. Sidewalks, cement, Bessemer, Ala...... Mar. 2
Mar. 22. Paving, vitrified brick, Independence, Mo.. Mar. 9
Mar. 22. Grading and draining, Cleveland, O..... Mar. 9
Mar. 23. Paving, asphalt & brick, Ft. Wayne, Ind. Mar. 9
Mar. 23. Stone, Jerry City, O.......... Mar. 9
Mar. 24. Macadamizing, Cincinnati, O.......... Mar. 2
Mar. 25. Road, Cincinnati, O.......... Mar. 9
Mar. 25. Road, Harrisburg, Pa.......... Mar. 9
Mar. 27. Paving, asphalt, Cincinnati, O.......... Mar. 9
Mar. 29. Paving, asphalt, Lima, O.......... Mar. 9
Mar. 29. Paving, brick, Cincinnati, O.......... Mar. 9
Apr. 1. Macadamizing, Norwood, O.......... Mar. 9
Apr. 1. Paving, Tacoma, Wash.......... Mar. 9
Apr. 3. Paving, Montgomery, Ala.......... Mar. 9
Apr. 5. Roads, Peru, Ind .......... Mar. 2
Apr. 18. Grading, etc., La Crosse, Wis.......... Mar. 2

### MISCELLANEOUS CONTRACTS.

Mar. 9. Steel shed, New Orleans, La.......... Feb. 16
Advertised, Eng. News, Feb. 16 and 23.
Mar. 9. Road roller, scarifier, New York, N. Y.. Mar. 2
Mar. 10. Pier work, New York, N. Y.......... Mar. 2
Mar. 10. Ditches, Shakopee, Minn.......... Mar. 2
Mar. 11. Electric elevators, Portsmouth, N. H.... Feb. 16
Mar. 13. Ferry structures, New York, N. Y...... Mar. 2
Mar. 13. Garbage crematory, Las Angeles, Cal.... Mar. 9
Mar. 14. Street sprinkling, New York, N. Y.... Mar. 9
Mar. 14. Fire engines, Vancouver, B. C.......... Mar. 9
Mar. 14. Broken stone, screenings, New York, N. Y. Mar. 9
Mar. 14. Transformers, etc., Washington, D. C.... Feb. 16
Mar. 14. Portland cement, Wheeling, W. Va...... Feb. 16
Advertised, Eng. News, Feb. 16 to Mar. 16.
Mar. 14. Machine tools, Washington, D. C. ....... Feb. 23
Mar. 15. Cable, Washington, D. C. .......... Feb. 23
Mar. 15. Street railway, No. Adams, Mass. ....... Feb. 23
Advertised, Eng. News, Feb. 16 and 23.
Mar. 15. Dam, Los Angeles, Cal.......... Jan. 12
Advertised, Eng. News, Jah. 12 to Feb. 23.
Mar. 15. Ditch work, Clarion, Ia.......... Mar. 2
Mar. 15. Street signs, Columbus, O.......... Mar. 2
Advertised, Eng. News, Mar. 2 and 9.
Mar. 15. Mail conveyors, Chicago, Ill.......... Mar. 2
Mar. 15. Portland cement, Peterborough, Ont...... Feb. 23
Mar. 15. Machine tools, Baltimore, Md.......... Mar. 9
Mar. 15. Submarine cable, Washington, D. C.... Mar. 9
Mar. 15. Lumber, New York, N. Y.......... Mar. 9
Mar. 15. Portland cement, New York, N. Y...... Mar. 9
Mar. 16. Top soil, New York, N. Y.......... Mar. 9
Mar. 17. Portland cement, Portage la Prairie, Man. Mar. 9
Mar. 17. Dredge, St. Louis, Mo.......... Jan. 19
Advertised, Eng. News, Jan. 19 to Feb. 10.
Mar. 18. Stone and cement, Wilmington, N. C..... Feb. 23
Advertised, Eng. News, Feb. 23 to Mar. 23.
Mar. 18. Tile drains, etc., Waterman, Ill.......... Mar. 9
Mar. 20. Garbage collection, Perth Amboy, N. J.... Mar. 9
Mar. 20. Drainage ditch, New Cambria, Mo. ...... Feb. 23
Mar. 20. Levee work, England, Ark.......... Mar. 2
Mar. 21. Drainage ditch, Webster City, Ia......... Feb. 16
Mar. 21. Naval supplies, Washington, D. C......... Mar. 9
Mar. 22. Drainage work, Fort Dodge, Ia.......... Mar. 2
Mar. 22. Concrete foundation, Detroit, Mich........ Mar. 2
Mar. 25. Electric crane, Portsmouth, N. H.......... Mar. 2
Mar. 25. Wharf, grading, filling, New Orleans, La. Feb. 23
Mar. 25. Electric elevator, Waco, Tex.......... Mar. 9
Mar. 27. Riprap embankment, Boston, Mass....... Mar. 2
Advertised, Eng. News, Mar. 2 to 30.
Mar. 28. Coal pocket, etc., Atlantic City, N. J.... Mar. 2
Advertised, Eng. News, Mar. 2 and 9.
Mar. 28. Drainage, Grant Park, Ill.......... Mar. 9
Advertised, Eng. News, Mar. 9.
Mar. 30. Coal conveying apparatus, W. Point, N. Y. Mar. 9
Advertised, Eng. News, Mar. 9 to 30.
Mar. 30. Rock excavation, Boston, Mass.......... Mar. 2
Advertised, Eng. News, Mar. 2 to 30.
Mar. 31. Electric railway, China .......... Oct. 20
Advertised, Eng. News, Oct. 20 to Dec. 29.

Apr. 1. Dredging, Sweden ........ Nov. 24
Apr. 1. Electric cranes, Portsmouth, N. H. ........ Mar. 9
April 4. Ditch, Fairmont, Minn. ........ Feb. 23
Apr. 8. Railway, Yazoo & Miss. Valley ........ Mar. 9
Apr. 10. Steel rails and fishplates, Australia ........ Mar. 9
Apr. 10. Channel improvement, Bermuda ........ Jan. 28
Advertised, Eng. News, Feb. 2.
Apr. 10. Dam, canals, etc., Denver, Colo ........ Feb. 16
Advertised. Eng. News, Feb. 16 to Mar. 30.
Apr. 15. Cruisers, Washington, D. C. ........ Mar. 2
Apr. 15. 100 miles railway, Tidewater Ry ........ Mar. 9
Advertised, Eng. News, Mar. 9 to Apr. 6.
Apr. 15. Electric crane, Puget Sound, Wash ........ Mar. 9
Apr. 25. Dredging, New Orleans, La ........ Mar. 9
Apr. 25. Canals, etc., New Orleans, La ........ Feb. 16
Advertised, Eng. News, Feb. 16 to April 20.
Apr. 29. Coal plant, New Orleans, La ........ Mar. 9
May 1. Light-house, Egypt ........ Dec. 22
May 10. Ditching, Stevens Point, Wis ........ Mar. 2
Advertised, Eng. News, Feb. 16.
No date. Cross ties, Louisville & Nashville Ry ........ Mar. 2
Advertised, Eng. News, Mar. 2.
No date. Water mains and sewers, Oakes, N. Dak. Mar. 9
No date. Removing stone, New York, N. Y. ........ Mar. 9
Advertised, Eng. News, Mar. 9 to Apr. 6.

## RAILWAYS.

*The names of parties awarded contracts are printed in capital letters.*

ALEXANDRIA, BAYOU, MACON & GREENVILLE.—S. H. Cordill, President, Como, La., is reported to have stated that this company will build a railroad from Alexandria, La., to Greenville, Miss., 175 miles. 150 miles of the line will be in Louisiana, and 25 miles in Arkansas. Surveys have been completed from Wisner, La., north 75 miles, and the line is under survey from Wisner to Alexandria, 75 miles. It is expected to begin construction during the coming summer. J. D. Garrison, Oak Ridge, La., is Ch. Engr. Mentioned previously.

BEE TREE.—S. F. Chapman, Gen. Mgr., Shope, N. C., informs us that construction of extensions has been suspended during bad weather. John J. Dalton is Ch. Engr., at Asheville, N. C.

CANADA.—The Canadian Construction Co. has been incorporated by Attorney John McLennan of Syracuse, N. Y., under the laws of the Dominion of Canada, with $1,000,000 capital stock, for purpose of building several sections of the new Grand Trunk Pacific Railroad.

CHICAGO, ROCK ISLAND & PACIFIC.—B. L. Winchell, Pres., according to a press report, has announced that bids have been received and contracts will be let soon for building an extension from Traskwood to Crossett, Ark., 108 miles.

Plans have been completed by the Rock Island for double-tracking 82 miles of line between Topeka and Herington, Kan. The work is to be completed by the time the 67 miles of new road from Topeka to Kansas City are built. The latter work is being done under Union Pacific supervision. W. L. Darling is Ch. Engr., at Chicago.

DENVER, ENID & GULF.—Ed. L. Peckham, Vice-Pres. and Gen. Mgr., Enid, Okla., writes us that an extension will be built to Kiowa, Kan., via Coldwater, Jett, Nashville. Locating party is at Nashville. Capital has been arranged for. Date of letting contracts not yet decided. W. D. Gerber, Enid, is acting Ch. Engr. Buckinridge Jones, St. Louis, Mo., is Pres.

DU BOIS SOUTHWESTERN.—H. Herden, Ch. Engr. Buffalo & Susquehanna Ry., at Yaleton, Pa., writes us that survey has been completed for extension from Juneau to Plumville, via Marchand; 20 miles. Noted on Feb. 23, under "Buffalo & Susquehanna." Capital is being secured. Contracts will be let about March 15. The line will connect with Indiana branch of Buffalo, Rochester & Pittsburg Ry. M. E. Olmstead, Harrisburg, Pa., is Pres.

GRAND TRUNK PACIFIC.—It is reported that PETER LARSON, of Helena, Mont., and FOLEY BROS., of St. Paul, Minn., have been awarded a $20,000,000 contract by Grand Trunk Pacific for building large section of the western end of the railway.

JEFFERSON & NORTHWESTERN.—Capital stock is to be increased $5,000, it is reported. A 25-mile extension is under consideration. C. E. Brown, Oak Cliff, Tex., is Ch. Engr. L. E. Purssell is Audr., at Jefferson, Tex.

KENTUCKY & TENNESSEE.—R. L. Stearns, Secy., Stearns, Ky., informs us that proposed branch line from Stearns to Barthell, Ky., will be six miles long. Company expects to build eight miles of railway this summer. Right-of-way is secured; preliminary survey has been run. Capital secured but date of letting contracts undecided as yet. Willard Griffeth, Stearns, Ky., is Ch. Engr.

KITTANNING RUN.—This company will construct a line between Altoona and Amsbry, Pa., a distance of 15 miles, to tap new coal fields. John Lloyd, President of the First National Bank, of Altoona, is a stockholder.

LONG ISLAND.—President W. F. Potter has announced that this company will spend fully $90,000,000 on Long Island, N. Y. The $40,000,000 expenditures on the railway itself do not include the expenses that will be incurred in connection with the tunnel of the Pennsylvania, New York & Long Island Railroad Co. under the Hudson and East Rivers and Manhattan Island, nor do they include the construction of the New York Connecting Railroad, which will cost $10,00,000, and will form a through connection, by way of a bridge over Hell Gate and Ward's Island, for the Long Island, the Pennsylvania and the New York, New Haven & Hartford railways. J. E. Savage, Jamaica, N. Y., is Ch. Engr.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—Contracts will be let at once for building the line from Thief River Falls, Minn., to Kenmare, N. D., 291 miles. The route is via Warren, Minn., and Ardock, Forest River, Conway, Bisbee and Omemee, N. D., 42 miles of the line being located in Minnesota and 249 miles in North Dakota. Thomas Green, Minneapolis, Minn., is Ch. Engr.

MOUNT HOOD RY.—We are informed that this railway is to be 18 miles long. Company has recently incorporated with $250,000 capital stock. W. N. Eccles, Hood River, Ore., is Pres.; Joseph A. West, Ogden, Utah, is Ch. Engr. Road will be built this summer. It is said that there will be one long tunnel. The line, as planned, will run from Hood River City through Hood River Valley, to a point above Hood River Falls.

NEW PARK & FAWN GROVE.—M. W. Bahn, York, Pa., Gen. Mgr., Stewartstown Ry. Co., advises us that this road, which practically is an extension of the Stewartstown Ry., will be nine miles long. The route is from Stewartstown, Pa., via Morrisville, Md., to Fawn Grove. John H. Anderson, New Park, Pa., is Pres. Old surveys will be again surveyed and new right-of-way obtained at once. Line will cost about $65,000, which is now being subscribed. Contracts will be let about April 1

NEW YORK CENTRAL & HUDSON RIVER.—Newspaper report states that this company has plans requiring the expenditure of more than $200,000,000 in extending the Cleveland, Cincinnati, Chicago & St. Louis Ry. into Chicago and connecting the Lake Shore, the Michigan Central, the Nickel Plate, and the "Big Four" with Chicago's important industries.

NEW YORK, NEW HAVEN & HARTFORD.—C. M. Ingersoll, Ch. Engr., at New Haven, Conn., is reported to have prepared specifications for double-tracking a 20-mile section of Highland division. Est. cost, $600,000.

NATCHEZ & GULF.—This company, which was recently reincorporated in Mississippi, will build from Natchez to Gulfport, Miss., 192 miles. Work has not yet been started. A. G. Campbell, Natchez, Miss., is Pres. W. W. Hungerford, Gulfport, Miss., is Ch. Engr.

NORTHERN CENTRAL.—A contract has been awarded to H. S. KERBAUGH, INCORPORATED, of Philadelphia, for the construction of two additional tracks for the Northern Central Ry. along the Susquehanna River from New Cumberland to the Fairview freight yard. The distance is 4½ miles. J. H. Nichol, Williamsport, Pa., is Asst. Engr.

NORTHERN COLONIZATION.—Hon. J. D. Rolland, Pres., 16 St. Vincent St., Montreal, informs us that this company will build an extension from Nominingue to Rapide l'Original, Que., 35 miles. Surveys will be run this summer. Capital has been secured. No date yet set for receiving bids. W. F. Tye, 66 Rosemount st., is Ch. Engr.

NORTHERN PACIFIC.—Contract for building 1½-mile railroad spur from the Northern Pacific Coeur d'Alene line, from point near Coeur d'Alene City, Wash., and extending to the B. R. Lewis Lumber Co.'s mills, has been let to A. L. SNOW & CO. The contract includes all construction except the laying of rails.

NUECES VALLEY, RIO GRANDE & MEXICO.—John C. Dennis, Ft. Worth, Tex., informs us that the line has been surveyed for distance of 100 miles. Contract for 40 miles of grading has been awarded. Entire capital needed has not been secured. WARD & LEE, Artesia, Tex., are the contractors. It is planned to build from Aransas Pass, via Tilden, to Carrizo Springs, 250 miles. T. Coppuge, Artesia, is Ch. Engr. S. D. Chamberlain, Ft. Worth, is Pres. Noted on Feb 9.

PAMLICO, ORIENTAL & WESTERN.—A. Cheney, Ch. Engr., New Bern, N. C., writes us that a 48-mile extension is planned from New Bern to Oriental, via Olympia, Reelsboro, Grantsboro, Alliance, Bayboro and Holly Point. Survey has been run and right-of-way practically secured. Capital has been partly obtained. Contract for entire line has been let to J. A. BRYAN, of New Bern. The railway starts with a 19° curve from the Atlantic & North Carolina Ry. at New Bern, crossing Neuse River on a low pile trestle, 5,447 ft. long; thence to Bayboro, 18 miles; four of which have been constructed; at Bayboro branches will extend to Oriental, nine miles, and to Holly Point, on Parnlico River, 21 miles. From New Bern to Reelsboro, eight miles, the line has been graded.

PENNSYLVANIA.—Company has awarded a contract to the EYRE CONSTRUCTION CO., for changing its line and building two stone arches over the Juniata River near Lewistown. The improvement will cost $1,000,000, and is to be completed in seven months. The trackage will be doubled.

PEORIA & PEKIN TERMINAL.—Preliminary to the work of double-tracking a part of their line to Pekin and making other improvements, the Peoria & Pekin Terminal Railway Company has authorizd an issue of $2,000,000 5 per cent. refunding bonds. Noted on Feb. 16.

PHILADELPHIA & READING.—Company is reported to be planning to double-track its Philadelphia, Harrisburg & Pittsburg line between Harrisburg and Shippensburg, a distance of 41 miles. Bids for the work will be invited. The cost will be about $500,000. William Hunter, Ch. Engr., Philadelphia.

QUEBEC & LAKE HURON.—I. C. Langelier, Secretary, Quebec, Que., writes us that surveys are nearly completed for this line. It will be 500 miles long and will extend from Quebec to French River, via Grand Mere, Maniwaki and Mattawa. Capital has been secured. Contracts will be let in April or May. Hon. A. Turgeon, Quebec, is Pres. Geo. B. Cornell, 20 Broad St., New York, is Ch. Engr. Details regarding the project and blue print are at office of Engineering News, New York.

RALEIGH & CAPE FEAR.—F. T. Ricks, assistant to Gen. Mgr., informs us that company is not yet ready to let contracts for construction of 30-mile extension from Lillington to Fayetteville. Right-of-way has not been secured and the new line has not yet been definitely located. It may run by way of Buies Creek.

ST. LOUIS & SAN FRANCISCO.—The Bentonville branch of the 'Frisco, which runs westward from Rogers to Grove, Ind. T., will be extended. Work will begin March 15. The extension will connect with the Oklahoma line at Afton, Ind. T.

It has been officially announced that the interests owning the 'Frisco railway system have acquired the Trinity & Brazos Valley Ry., extending from Cleburne, Tex., to Mexia, Tex., and that the latter road is to be extended at once to Houston and Galveston, and north to Ft. Worth. At Houston connection will be made with the St. Louis, Brownsville & Mexico Railway, which is under construction from Houston to Brownsville, about 360 miles. At either Brownsville or Fordyce, Tex., it is proposed to bridge the Rio Grande River to connect with the Mexican National Ry. It also is stated that it is the intention of the company to extend south from Brownsville, along the Gulf coast to Tampico, Mexico. From Cleburne north the Trinity & Brazos Valley Ry. is to be extended to Ft. Worth to connect with the Rock Island-'Frisco lines and the Texas road of the Colorado Southern system. Company may build into Beaumont and Orange, Tex., from Houston or some point on the line north of Houston.

It is reported that the Fort Worth & Rio Grande Ry. ('Frisco) is to be extended south from Brady, Tex., via San Antonio, to Kingsville. B. F. Yoakum is Chn. of Board and A. J. Davidson, Pres. of the 'Frisco Railway system. Mr. Yoakum is reported to have stated that it is the intention of the interests he represents to build 1,000 or 1,200 miles of railway in Texas during the next two or three years.

Surveys are being made for the extension of the Trinity & Brazos Valley Railway from Mexia to Houston, about 150 miles. F. G. Burns is locating Engr., at Mexia, Tex.; R. H. Baker is Gen. Mgr., Austin, Tex. In connection with this work, B. F. Yoakum, Chn. of Bd. of St. Louis & San Francisco Ry., 71 Broadway, New York, advises us that plans have not yet been definitely decided upon.

SOUTHERN.—BOWDRY & WILCOX, contractors, will construct a branch line from the main line of the Southern Railway near Oakman, Ala., to the point where the Atlas Coal Co. will open new mines.

SCRANTON, FACTORYVILLE & TUNKHANNOCK.—J. Selden Swisher, Pres., Scranton, Pa., informs us that the contract for building this railway has been let to J. G. McHENRY, Benton, Pa. Line will extend from Scranton to Tunkhannock, via Clarks Green, Waverly, Dalton, Factoryville and Lake Winola, 30 miles. A. B. Dunning, Scranton, is Ch. Engr. Noted on March 2.

SOUTHERN.—It is said that this company has in view a plan to build extensive yards at Middleboro, [illegible]

SOUTHERN INDIANA.—As noted on Feb. 23 the KINSER CONSTRUCTION CO., 1747 Railway Exchange Bldg., Chicago, has general construction contract. T. F. HILL & Co., The Rookery, Chicago; HICKS & CO., of North Vernon, Ind., and the PEOPLE'S CONSTRUCTION CO., of Davenport, Ia., have been awarded contracts for the concrete work. Contracts for the road-bed work have been awarded GEORGE B. VAUGHN & CO., St. Louis; LEONARD & McDOWELL, Terre Haute; HARRINGTON & BURK, Mississippi; BETZ & CO., Evanston; R. W. MARTIN, Evansville, Ind.; I. T. GARDNER, Chicago, and BAWLDNER & DAVIS.

TIDEWATER.—Bids are asked until April 15 for gradation, including masonry, of 20 sections, five miles each, of this road, extending west from Sewell's Point (near Norfolk, Va.). B. T. Elmore, Asst. Ch. Engr., Roanoke, Va. (Advertised, Engineering News.) William Nelson Page is Pres. Estimated cost of the project is $50,000,000. Norfolk, Va., has voted $95,000 appropriation. Terminal will be located at Sewell's Point, Va. The railway will extend from Pool No. 2 on Great Kanawha River, West Virginia, through Giles County, Va., Montgomery County, to Roanoke, Bedford City, Campbell, Brookneal; through Lunenburg, Brunswick, Greensville, Sussex, Southampton, Isle of Wight and Nansemond Counties to Suffolk. From Suffolk the line will come into Norfolk County.

YAZOO & MISSISSIPPI VALLEY.—A. S. Baldwin, Engr. of Construction, Chicago, Ill., informs us that contracts will be let April 8 for extension from Silver City to Valley Park, Miss., 45 miles. Location surveys are nearly completed and right-of-way obtained for three-fourths of distance.

## STREET AND ELECTRIC RAILWAYS.

*The names of parties awarded contracts are printed in capital letters.*

AVON, MASS.—The Old Colony Street Ry. Co. will lay a double track through Avon. G. F. Seibel is Gen. Supt., Taunton, Mass.

PLYMOUTH, MASS.—Chas. F. Remington, Pres. Plymouth County Street Ry. Co., 50 Congress St., Boston, informs us that surveys are completed and rights of way acquired for proposed electric railway from Rockland to Plymouth via Brockton, Marsfield and Duxbury. Mr. Remington also states that the contract for construction has not yet been awarded; poles, ties and iron have already been purchased. Quotations on equipment from supply houses are solicited.

WEST NEWTON, CONN.—The contract for electrical work for trolley line from Jeanette to West Newton, to be constructed by Jeanette, West Newton & Monongahela Valley Street Ry. Co. has been given to NEW ENGLAND ENGINEERING CO., of Waterbury, Conn. The line will be three miles long and pass through Edna, Arona and New Madison. Construction will begin April 1.

NEW YORK, N. Y.—We are informed that the New York, Westchester & Boston Ry. Co. has established a branch office in Mt. Vernon Trust Co. Bldg., Mt. Vernon. This will be the headquarters of E. B. Naylor, Res. Engr., in charge of work between city line and White Plains. The engineers have already begun the laying out of exact route between northern part of city of New York and White Plains, and plans are being pushed with a view to breaking ground as soon as weather permits.

ONEIDA, N. Y.—We are informed that the Rome & Onedia Electric Ry. Co. has secured right of way from Rome to Oneida, running through the highway almost the entire distance of 13 miles. Work will commence about April 1. The road will be of a heavy type, 85-lb. rails, and the equipment of the most costly kind. Est. cost, $500,000.

WAVERLY, N. Y.—The Chemung Valley Traction Co. with a capital of $700,000 to operate a street railway 18½ miles long from Elmira to Waverly. Directors: E. E. Buchanan, Geo. McCann, of Elmira; J. E. Ford, P. L. Lang, of Waverly, and others.

YONKERS, N. Y.—The Bronx, Yonkers & White Plains Ry. Co. was incorporated to operate an electric railway line, 11 miles long, from Yonkers to White Plains, there to connect with Harlem division of New York Central. Capital stock, $110,000. Directors: W. H. Whittaker, J. H. Matthews, of New York; E. M. Booth, I. M. Hunt, of White Plains, and others.

CORRY, PA.—An ordinance has been introduced in Councils granting a franchise to C. P. Northrop and associates to build an electric railway through the city. Surveys have also been completed for an electric railway between Corry and North East via Findley Lake.

DU BOIS, PA.—The Du Bois Electric Traction Co. contemplates in the spring extending its electric railway about five miles. J. E. Adams is Supt.

TAMAQUA, PA.—The Mahoney City & Tamaqua Street Ry. Co. has been chartered. The line will be 10 miles long, and the capital stock is $60,000. It will extend from Mahony City to Tamaqua via Park Place, Delano, Grier City, Lakeside, Barnesville and Mentzer. E. M. B. Shepp is Pres., City.

BALTIMORE, MD.—It is reported here that plans are under consideration by United Railways & Electric Co., for razing its present East Pratt St. power plant and erecting a new plant to be about 136 ft. sq. D. B. Banks, is Ch. Engr., Continental Trust Bldg., Baltimore.

BIG STONE GAP, VA.—We are informed that survey is now being made for proposed electric railway from Big Stone Gap to Apalachia, a distance of five miles. Estimates of cost will be ready soon at which time it is intended to organize a company and put the line under construction either by contract or company work. Malcolm Smith is Engr., City.

DANVILLE, VA.—According to report the Danville Street Railway & Electric Co. will extend its lines. J. M. King is Ch. Engr.

POCAHONTAS, VA.—The Pocahontas, Graham & Tazewell Electric Belt Line has been incorporated, with J. S.

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Browning, Pres.: Wm. Leckie, vice-Pres., V. L. Sexton, Secy., all of Pocahontas, Va. Capital stock, $50,000; object and purposes, to construct an electric railway.

MIAMI, FLA.—B. B. Tatum has applied for a franchise to construct a street railway in this city.

HUNTSVILLE, ALA.—L. Watt Allen, of Decatur, Ala., is surveying rights of way for an electric railway from Nashville, Tenn., to Huntsville. Work will commence as construction as soon as all rights of way can be secured.

GULFPORT, MISS.—An electric railway will be established between Gulfport and Biloxi. J. T. Jones, of Gulfport, Walter White, of Biloxi, and others are interested and can give information.

BATON ROUGE, LA.—Immediate work is to begin on construction of Louisiana Railway & Navigation Co.'s road from this place to New Orleans. At a recent subletting of contract, which was originally awarded to Contractor Wait of New Orleans, ROBT. T. CLARK, of Natchez, Miss., was given contract for construction of about eight miles of road immediately out of this city.

LAKE CHARLES, LA.—An electric street railway will be constructed here. Thomas Bird is Pres. and J. A. Landry is Treas., of the company.

MONROE, LA.—It is reported that this city has completed old financial arrangements for construction of new electric railway. Work will begin at an early date.

MEMPHIS, TENN.—An extension of its franchise has been granted to Memphis Street Ry. Co. by City Council, and $1,000,000 will be spent in extending the lines, the work to be completed by Dec. 1. F. Smith is Gen. Supt.

LAFAYETTE, IND.—James Murdock & Sons, interested in the Wabash Valley & Fort Wayne Traction Co. announce that it has been decided to improve line by straightening all curves. Cost, $200,000. At the same time the work of constructing an extension of line from Logansport to this city via Delphi will be begun. The company will build a new power plant in Lafayette. M. J. Kehoe is Ch. Engr., Ft. Wayne. Previously noted.

PERU, IND.—It is stated that work on construction of Central Indiana Traction Co.'s line between Peru and Plymouth, will be started as soon as weather permits. Jerome Herff can probably inform.

TERRE HAUTE, IND.—Surveys are being made by Terre Haute Traction & Light Co. between Terre Haute and Sullivan with a view to building a new electric railway to that town in the near future. H. E. Smith is Ch. Engr.

LINCOLN, ILL.—The Lincoln & Mount Pulaski Interurban Ry. Co. has been incorporated, with a capital of $25,000, to build an electric railway between Lincoln and Mt. Pulaski. Incorporators: Herman S. Bekemeyer, John C. England and Jos. F. Beidler.

WATSEKA, ILL.—This city has granted the Watseka & Kankakee Electric Ry. Co. a right of way into city and it is probable that the road will be built the comipng summer.

MINNEAPOLIS, MINN.—Local press reports state that the Twin City Rapid Transit Co. will construct an electric line to Excelsior this spring. D. W. Dozier is Ch. Engr.

KANSAS CITY, MO.—Geo. B. Harrison, Pres. Missouri Central R. R. Co., of Glasgow, Mo., is reported as stating that work on proposed electric road to connect Kansas City and St. Louis would begin this spring. Cost, $12,000,000. C. A. Loomis is Ch. Engr., City.

ORONOGO, MO.—An electric railway will be built through this city from Webb City to Neck City, Alba and Purcell. The Mayor can give information.

HOUSTON, TEX.—The Houston-Galveston Electric Ry. Co., capital $1,350,000, has been chartered to build an electric railway between Galveston and Houston. Incorporators: Frank P. Read, Wm. Johnston, R. M. Johnston, Geo. L. Horton and A. D. Trotter.

GUTHRIE, OKLA.—The Knox Engineering Co., of Chicago, Ill., has supervision of work on Guthrie Street Railway, which is now being built by METROPOLITAN CONSTRUCTION CO., of which J. W. Shartel, of Oklahoma City, is the head. The system in Guthrie will ultimately be connected with that in Oklahoma City by an interurban line.

FLORENCE, COLO.—It is said that the building of the Florence Street Railway is to be begun this month. In a few days contracts will be let for 1,000 tons of 60-lb. steel rails, poles and other electrical equipment, so it is said.

SPOKANE, WASH.—It is stated that the Washington Water Power Co., of this city, has increased its capital stock from $3,500,000 to $5,000,000. The increased capitalization is to provide for the building of interurban line to Medical Lake, 16 miles west of ths city; the building and equipment of an 18,000-HP. plant at Post Falls, Idaho, and laying of about three miles of extension of the company's city street car system. It is said the Eastern directors of the company have authorized a bond issue of $3,500,000 for building a road south 75 miles to Colfax, Wash. D. L. Huntington is Gen. Mgr.

HAMILTON, ONT.—The Hamilton, Ancaster & Brantford Electric Ry. Co. has let contract for building road to HAINES BROS. of New York. Cost, about $500,000.

TORONTO, ONT.—R. J. Fleming, Mgr., Toronto Ry. Co. has advised City Engineer that his company is prepared to lay tracks from Front St. over Bathurst St. to exhibition grounds provided the city will construct necessary bridges and lay roadbed.

## LIGHT, HEAT AND POWER PLANTS.

*The names of parties awarded contracts are printed in capital letters.*

LACONIA, N. H.—Bids are asked until March 27 for lighting the streets for a period of ten years. J. G. Quimby, Chn. St. Lighting Com., Lakeport. (Advertised, Engineering News.)

MONROE, N. H.—The Monroe Water Power Co. has been incorporated by A. S. Batcheller, of Littleton; Chas. H. Hosford, of Monroe; Irving W. Drew, Ezra Mitchell, Chester B. Jordan and Merrill Shurtleff of Lancaster; Geo. Van Dyke, of Boston; and Philo B. Van Dyke, of Barnet, Vt. Legislature has passed an act authorizing the company to construct a dam or dams across Connecticut River at Monroe. Electrical power will be supplied to towns in Grafton county, N. H., and Caledonia and Orange counties, Vt. The capital stock is $1,500,000.

CHICOPEE, MASS.—The Dwight Mfg. Co. will install an electric power plant in its mill to replace present electric equipment of water wheels and steam engines.

LYNN, MASS.—The Lynn Gas & Electric Co. will install a new gas holder with capacity of 2,000,000 cu. ft. Capital stock will be increased. L. S. Johnson is Ch. Engr.

SPRINGFIELD, MASS.—It is said that the Springfield Gas Light Co. has petitioned the State Gas and Electric Light Commissioners for permission to increase its capital from $550,000 to $850,000, for making various improvements, including enlargement of the engine and purifier houses, new engine, condensers, tar extractors and purifiers, a coke-handling plant, new retort house, water-gas house, etc. Some of these improvements are now in progress.

Hampden Electric Co. will be incorporated, with $100,000 capital, it is reported, to develop water-power on Westfield Little River. Estimated that $500,000 will be expended, eventually. A. S. Kneil, W. L. Church, H. F. Pierce and Frank E. Shedd, of Westfield, are the promoters of project.

ALBANY, N. Y.—The Eastern Monroe Electric Light and Gas Co. has been incorporated with a capital stock of $250,000. It is stated that the object of the company is to sell light, heat and power in Rochester, Brighton, Irondequoit and other towns in the vicinity. The directors of the new company are Henry C. Brewster, of Rochester; Andrew H. Bown, of Penfield; Walter A. Parce, of Fairport, and Clarence E. Shuster, of Penfield.

BUFFALO, N. Y.—Acting Commissioner Morse has prepared estimates of cost of proposed municipal electric light plant. Total cost is figured at $1,792,000, which includes site on city property at foot of Jersey St. Detailed cost, as follows: Engine and boiler plant, $300,000; generators, $105,000; buildings, $85,000; total for central station, $490,000; high-pressure feeders and cables, $350,000; pole lines, $450,000; conduits, $77,000; arc lamps and fittings, $125,000; four sub-stations with equipment, $240,000; 20,000 incandescent lights, installed, $60,000. Total cost, $1,792,000.

LYONS, N. Y.—J. M. & M. C. MUCKLEY, 67 Harrison St., Worcester, Mass., are reported to have been awarded the contract for an electric power house for the Auburn & Syracuse Street Ry. Co., at Lyons.

NEW YORK, N. Y.—Bids are asked by Dept. of Water Supply, Gas and Electricity, until March 15, 2 p. m., for furnishing, operating and maintaining electric lamps for term of nine months and 16 days, from March 16 to December 31, 1905, inclusive. Also for furnishing gas or other illuminating material for and lighting, extinguishing, cleaning, repairing and maintaining the public lamps (and supplying gas, etc., for new lamps when required) and for making certain repairs to lamp-posts, and for furnishing burners and appliances of improved system of lighting, for the term of nine months and 16 days, from March 16 to Dec. 31, 1905, inclusive. John T. Oakley, Comr.

The Board of Estimate has appropriated $600,000 for a site and to begin the construction of a municipal electric lighting plant. See issue of Feb. 16.

NEW YORK, N. Y.—Contract has been awarded to the ELECTRIC STORAGE BATTERY CO., of Philadelphia, for installation of eight electric storage reservoirs on line of New York Central & Hudson River Ry., between Ossining, White Plains and Grand Central station, New York.

DOVER, N. J.—Bids are asked until March 28, 1 p. m., for the erection in brick and steel of one wheel and dynamo house, one building for general shops, six store houses, and one magazine building at U. S. powder depot.

TRENTON, N. J.—Common Council has awarded the contract for supplying the city with 500 Welsbach gas lamps at $29.75 per lamp per year, for three years, to the PUBLIC SERVICE CORPORATION and the contract for supplying 100 naphtha lamps at $26.40. THE AMERICAN STREET LIGHTING CO., of Baltimore, was awarded a 1-year contract.

WILMINGTON, DEL.—The American Lighting Co., of Wilmington, was lowest bidder for lighting city streets with gas.

BALTIMORE, MD.—Bids were received March 8 by the Board of Awards for furnishing and operating electric arc lamps. Robt. J. McCuen is Supt. Lamps and Lighting.

LURAY, VA.—The Luray Electric Co. has been chartered to light Luray Caverns. E. C. Harnsberger is Pres. and Treas.

LYNCHBURG, VA.—Comon council is considering plan to establish a $40,000 municipal electric light plant.

HUNTINGTON, W. VA.—It is announced that the Triple State Gas Co., capitalized at $3,000,000 and the Kanawha Gas Co., capitalized at $800,000, supplying natural gas to Huntington, Charleston and other West Virginia cities, have merged into the United States Natural Gas Co., with a capitalization of $6,000,000. E. H. Gary, Max Pam, 71 Broadway, and J. E. French, of New York; P. S. Grosscup and W. O. Johnson, of Chicago; Charles Miller and O. D. Bleakley, of Franklin, Pa., are interested. The company has under lease 124,000 acres of land. A 17-in. gas main will be laid to Portsmouth and a 19-in. main to Huntington. The NATIONAL TUBE CO., of McKeesport, Pa., has been awarded $800,000 contract for pipe for the U. S. Natural Gas Co.

FORT VALLEY, GA.—J. L. Fincher, Mayor, advises us that city has voted to issue $12,000 of bonds for construction of an electric light plant and water-works extension. Nothing else has been done toward establishing plant. Bonds will be passed upon on April 15. Estimated cost is $8,000. Plant will be operated by steam; capacity will be 1,500 25-c. p. arc lights and incandescent lights.

SYLACAYA, ALA.—Arthur Pew, of Atlanta, Ga., is preparing plans for water-works and an electric light plant for which $20,000 bonds have been sold, as noted on March 2. Contracts probably will be let soon.

ABBEVILLE, LA.—An election will be held on March 28 to vote on issuing $45,000 of bonds for water-works, sewer system and an electric-light plant. R. C. Huston, of Laurel, Miss., is Engr. Geo. W. Summers is Secy. of Council.

LAKE CHARLES, LA.—S. O. Shattuck, Cy. Clk., has announced that Ruebel, Schwettman & Wells, of St. Louis, Mo., have completed plans and specifications for proposed municipal electric light plant which will cost about $70,000.

JEFFERSON CITY, TENN.—The Jefferson City Electric Light Co. will erect an electric plant on site of Forche tannery.

KNOXVILLE, TENN.—The Knoxville Power Co. will build a power plant this summer. The company was organized in Knoxville over four years ago by Gen. John T. Wilder, R. W. Austin and others. The company plans to build a dam on the Little Tennessee River near the head of the stream, and erect a plant where electricity would be generated for sale in this city. Estimated cost is $2,000,000.

MEMPHIS, TENN.—The Merchants' Light & Power Co. has been granted a 30-year franchise to supply electric lights and power and gas lighting. See Feb. 23.

LAWRENCEBURG, KY.—W. E. Dowling, of the Commercial Club, states that it is proposed to construct an electric light plant, at a cost of $12,000. Noted last week.

DAYTON, O.—Bids are asked until March 22 by the Board of Trustees of Dayton State Hospital for furnishing and erecting a battery of water-tube boilers with automatic stokers; coal conveying and ash-handling machinery; piping of power plant and tunnel, and pipe covering. A. F. Shepherd is Secy.

TOLEDO, O.—The Toledo, Port Clinton & Lakeside Railway Co. has let contracts for the equipment for its permanent power-house, which will be located at Port Clinton or Oak Harbor. THE ALLIS-CHALMERS-CO. has contract for complete steam and electrical equipment, which will consist of two 800-HP. generators and engines and four 400-HP. Erie City boilers. P. McCrory, of Toledo, is Pres. of the company, and Hugh Schunck, of Toledo, Secy.

URBANA, O.—Council has granted a franchise to T. A. Edmondson and C. H. Marvin to install an electric light plant in Urbana.

KIRKLAND, IND.—Bids are asked by Alonzo E. Purkey, Auditor of Newton County, until noon, April 3, for installing steam heating plant in new court-house. Joseph T. Hutton, Arch., 306 Hammond Bldg., Hammond, Ind.

TERRE HAUTE, IND.—The contract has been let by the board of public works to the McCOLLOCH CO., of St. Louis, to prepare plans and specifications for the proposed municipal lighting plant for Terre Haute. J. W. Wood is in charge of the work.

ALPENA, MICH.—See under Water-Works.

ALPENA, MICH.—The Alpena Power Co., Ltd., has been incorporated with capital stock of $90,000. F. W. Gilchrist, Alpena, is Chn. Co.; Frank W. Fletcher is Treas. Company has secured water power rights along Thunder Bay River and will erect a power plant.

DOWAGIAC, MICH.—City will vote upon plan to improve the electric light plant, which will include the rebuilding of the pole line and rewiring system. There probably will be required about 20 miles of No. 6 W. P. wire; a 75 KW. regulator at the station; installing about 150 incandescent series lamps. D. E. Connine is Supt. F. W. Jones is Pres. Bd. Pub. Wks.

GROSSE POINTE, MICH.—An electric lighting plant is under consideration.

EAST ST. LOUIS, ILL.—Applications for electric lighting franchises have been made to council by the Illinois Illuminating Co., the East St. Louis Consumers' Electric Light Co. and the St. Clair Light & Power Co. The St. Clair Co. has filed incorporation papers and is capitalized at $75,000. The incorporators are C. L. Gray, H. C. Bernard and R. W. Sikking. Mr. J. B. Sikking, Jr, is Gen. Mgr., at 136 Collinsville Ave. The East St. Louis Consumers' Co. has been incorporated with $75,000 capital. The incorporators are: H. J. de Haan, Fred. Ziegenhein, Herman Thoene, Charles Maurer, C. O. Clark, R. A. Richardson and S. P. Chapin.

DECATUR, ILL.—The Consumers' Gas & Electric Co. has been incorporated with capital stock of $50,000. The object of the company is to manufacture light, heat and power. The incorporators are Wilson M. Bering, Charles S. Needham and James M. Gray, of Decatur.

DANVILLE, ILL.—The Danville Street Railway & Light Co. is to rebuild its lighting system in this city. Company has purchased $60,000 worth of machinery to be installed in the plant here. C. L. Harry is Ch. Engr.

CHICAGO, ILL.—Plans for the erection of a large new power house for the Chicago City Railway Company, to cost $5,000,000 to $6,000,000, are being prepared by the engineering department of the company. The power house probably will be built near the south branch of the Chicago River and north of 22d St. It is said construction will begin soon. T. E. Mitten is in charge.

FOND DU LAC, WIS.—Dr. C. A. Beebe informs us that the Semerlin Heat, Light & Power Co. will erect a stone and wood plant, 40 × 300 ft., three stories high. It will cost $5,000. Equipment will cost $75,000. Plant is partly installed. Company needs one 60 or 70-HP. boiler, one 55 or 60-KW. electric generator and a number of 8 to 10-HP. motors. Company will manufacture fuel from peat.

ALMA, WIS.—Bids are asked by Robert Lees until March 10 for a steam heating plant to be installed at Buffalo county court house.

AMES, IA.—Bids were received on March 8 for erection of a central heating station and heating tunnel at Iowa State College. Proudfoot & Bird, Des Moines, Ia., are Archs.

DULUTH, MINN.—The Great Northern Power Co. has awarded the contract for the construction of the canal between Thomson and Duluth to PORTER BROS., of Duluth, at between $300,000 and $325,000. The work will be started at once, and will be completed within a year; the limit set being March 1, 1906. The canal will be two miles long. Where it goes through rock it will be 30 ft. wide at both the bottom and the top, with perpendicular sides, but where earth is to be excavated the canal will be 36 ft. wide at the bottom and the sides will extend outward, with the width at top 96 ft. Previously noted.

WAVERLY, KAN.—Bids are reported as being asked by W. H. Williams, City Clk., for the purchase of $15,000 of bonds for water-works and an electric light plant. Burns & McDonnell, Kansas City, Mo., are Engrs.; J. C. Fear is Mayor.

MARION, S. DAK.—The town council has awarded to J. A. Heeren and other local business men a franchise for the installation and operation of a lighting system.

MEXICO, MO.—The Mexico Electric Light Co. has been granted a 20-year franchise.

ST. LOUIS, MO.—Bids are asked until noon, March 17, for the installation of exterior and interior electric lighting system at Jefferson Barracks, Mo. Major Thomas Cruse, Q. M.

TULSA, IND. T.—The city council has granted a franchise to the People's Gas Co., of Tulsa, to pipe the city for furnishing gas for industrial purposes.

TACOMA, WASH.—The Standard Oil Co. has completed plans for the erection of a distributing plant in Tacoma which, when finished, will represent a total outlay of about $100,000. John McLean is representative.

ONTARIO, ORE.—Seymour H. Bell and Chas. H. Chance, of Sumpter, have secured franchise for constructing and operating an electric light plant at Ontario, Ore. Cost will be about $25,000. Work will commence at once.

PRAIRIE CITY, ORE.—Geo. E. Wright, of Washington Gulch, near Baker City, Dr. Carlton Faull and Justice of the Peace Alf Curry of Baker City, are reported to be negotiating for the purchase of Prairie City electric light plant. If purchased improvements costing $25,000 will be undertaken. Water-works system is under consideration.

SAN FRANCISCO, CAL.—The National Electric Contracting Co. has been incorporated here, with a capital stock of $50,000, by D. L. Randolph, J. G. Whitney, C. C. Pomeroy, Joseph Knowland, Henry Kregs, B. R. Hecht and Ferdinand Reis, Jr. Office will be at 455 Sutter St., San

Francisco. D. L. Randolph is Mgr. Company will engage in the wiring of buildings, installing of power plants, etc.

SANTA MONICA, CAL.—Bids will be received until March 27 by the Board of Trustees for a gas franchise, as applied for by A. C. Barke.

The Independent Gas Co. has been incorporated with capital of $60,000. A site has been selected at Ninth and Colorado Sts., and it is expected that work of installing the plant and laying the gas mains will soon be commenced. Among the stockholders are A. E. Robinson, C. C. Rathbone, F. E. Bundy and others, of Santa Monica.

CEDARVILLE, CAL.—An electric plant is under consideration. H. Hawkins is interested. A company is to be incorporated with a capital stock of $20,000.

SALT LAKE CITY, UTAH.—George W. Riter advises us that plans are being prepared for a diverting dam at inlet of a conduit which is to be built from Big Cottonwood Creek. An electric generating plant will be located at the outlet of the conduit with 300-KW. electrical output.

OWEN SOUND, ONT.—Bids are asked until March 17 for $15,000 gas plant improvement bonds and $10,000 electric light plant improvement bonds. A. J. Spencer is Town Treas.

ST. THOMAS, ONT.—Bonds to the amount of $200,000 are reported sold in connection with purchase of the gas and electric light plant.

CALGARY, ALTA.—Bids are asked until March 15 for installing complete an electric light plant. The work is divided into the following contracts: (A) Electrical equipment in power house; (B) engines and connections; (C) boilers and connections; (D) power house and chimney; (E) poles; (F) all outside work; (G) arc lamps, wire insulators, etc. F. W. Thorold, Cy. Engr.

## BRIDGES.

*The names of parties awarded contracts are printed in capital letters.*

AUGUSTA, ME.—The Legislative Committee on Ways and Bridges is considering a resolve appropriating $20,000 for construction of a new bridge between Wiscassett and Edgecomb.

PROVIDENCE, R. I.—Bids are asked until March 30 instead of March 22 for the construction of the Rhode Island stone bridge. (Advertised Engineering News.)

BRIDGEPORT, CONN.—H. G. Scofield, Cy. Engr., informs us that a concrete bridge will be erected between Fairfield and Bridgeport. Cost, $25,000. A. B. Hill, of New Haven, is Engr.

STONINGTON, CONN.—Surveys are being made by New York, New Haven & Hartford R. R. Co. for new steel bridge across Wequetequock Cove.

NEW YORK, N. Y.—The following bids were received March 2 by Geo. E. Best, Bridge Comr., for constructing lattice railing on footwalks of Williamsburg bridge: Chas. Meads & Co., 220 Broadway, $20,430; Louis Mechsher, 1133 Broadway, $20,445; Northeastern Const. Co., Fuller Bldg., $20,919; Snare & Triest Co., 39 Cortlandt St., $24,950; Empire Const. & Supply Co., 136 Liberty St., $20,500; W. D. Bailey, $18,350; Binney & Godfrey, $21,272; T. C. O'Donnell, $24,500; Eagle Iron Works Co., 850 DeKalb Ave., Brooklyn, $20,974.

NEW YORK, N. Y.—The contract recently given by New York, New Haven & Hartford to New York Contracting & Trucking Co. for improvements on roadway in the vicinity of New York includes the building of a large drawbridge over Pelham Bay.

NEW YORK, N. Y.—It is reported that the plans and specifications for towers and superstructure of Manhattan bridge will be ready for advertising by May 1. Geo. E. Best is Bridge Comr.

BAYONNE, N. J.—Bids were received by Boulevard Commission for repairing bridge over Central Railroad in Bayonne as follows: Uvalde Asphalt Co., Broadway, New York, $9,091 (awarded contract); United States & Venezuela Asphalt Co., $9,178; James Billington, $12,083; Jos. Cutley, $15,238.

GALETON, PA.—The contract for constructing an iron bridge here, 240 ft. long, was awarded to WARSAW, WILKINSON CO., of Warsaw, N. Y. Cost, about $7,500.

HARRISBURG, PA.—Bids are asked by J. M. Shumaker, Supt. Pub. Grds. & Bldgs., until March 23 for rebuilding substructure and superstructure of bridge over Catawissa Creek, Columbia County.

Bids will be received at same time and place for rebuilding substructure and superstructure of bridge over Nescopeck Creek in Luzerne County.

SELINSGROVE, PA.—The contract for erecting steel bridge with stone abutments at this place was awarded to the EYRE CONSTRUCTION CO., Arcade Bldg., Philadelphia, for $64,975. Bids were opened Feb. 28.

PITTSBURG, PA.—The contract for building nine bridges for Pittsburg, McKeesport & Greensburg Ry. Co., between Irwin and Trafford City, has been let to NELSON, BUCHANAN & CO., of Pittsburg.

LEWISTOWN, PA.—The Pennsylvania R. R. Co., W. H. Brown, Ch. Engr., Philadelphia, will spend $1,000,000 in building new bridges over Juniata River, near here, completing the four-tracking of middle division and minimizing curve in line at this point. The contract for the work was let recently to the UYVE CONSTRUCTION CO.

READING, PA.—It is expected that the County Commissioners will soon call for bids for constructing new bridge over Tulpehocken, between Penn and North Heidelberg. Est. cost, $5,000.

SCRANTON, PA.—Among the improvements to be made this year by the Scranton Ry. Co. will be the construction of a viaduct from foot of Mulberry St. to Providence Road, spanning tracks of several railroads and Lackawanna River. The North Main Ave. line will be extended by building a viaduct over Lackawanna crossing on North Main Ave. E. T. Reed is Engr., Scranton.

WASHINGTON, D. C.—We have received the following information concerning the projected New York Ave. bridge, contract for which is to be placed shortly by the Baltimore & Ohio R. R. Co. The bridge will have a total length of about 600 ft., a width of roadway of 50 ft., and two sidewalks of 12 ft. each. It will consist of plate girder spans, resting on steel columns, with concrete abutments for the end spans. Estimated cost is about $150,000. The bridge was designed by J. E. Grenier, Baltimore, Md., Engr. Bridges and Bldgs. of B. & O. R. R., and W. J. Douglas, Engr. of Bridges of District of Columbia, and will be built by B. & O. R. R. Co., under direction of Col. John Biddle, Engineer Commissioner of District of Columbia.

ROANOKE, VA.—The VIRGINIA BRIDGE & IRON CO., of this city, was awarded the contract Feb. 25 for constructing 22 bridges for Deep Water Ry.

GREENVILLE, S. C.—Bids are asked by Board of Supervisors until March 22 for building approaches to Bennett's and the new bridge on Enoree River, near Batesville.

KNOXVILLE, TENN.—The Southern and Louisville & Nashville Railways and Knoxville Traction Co. will construct a viaduct over Clinch Ave. at a cost of $76,000. The Mayor can give information. S. J. Moreland is Cy. Engr.

CLEVELAND, O.—Bids are asked by Board Public Service until March 20 for constructing superstructure of a steel highway bridge on Detroit St. A. R. Callow, Secy.

COLUMBUS, O.—It is stated that bids will be received until March 30 by L. E. Jones, Audr., Franklin County, for construction of substructure and superstructure of Thompson bridge over Mason run.

COLUMBUS, O.—County Commissioners have awarded the contract for substructure of Hubbard Road bridge to FRITZ BROS., of Zanesville, for $5,695.

VINCENNES, IND.—A bill was passed by Senate Feb. 20 authorizing the Vincennes, West Baden & Louisville Traction Co. to build a railroad bridge over White River.

VALPARAISO, IND.—We are informed that the contract for constructing a steel bridge, 52-ft. span, was awarded by County Commissioners March 6 to DE MASS BROS., of Chesterton, Ind., for $1,665.

RICHMOND, IND.—Plans are being prepared for construction of a viaduct in West Second St. Address City Clerk. H. L. Weber is Cy. Engr.

RICHMOND, IND.—Bids are asked by County Commissioners until March 11 for building a bridge over Elkhorn Creek in Boston Township. John F. Dynes, Chn.

CEDAR RAPIDS, IA.—A bridge is to be constructed over Cedar River at Second Ave. Cost, $80,000. W. W. Chery, Chn., Bd. Pub. Wks., is in charge.

ELK RIVER, MINN.—Bids are asked until March 11 for constructing substructure and superstructure of a steel bridge over Mississippi River. A. H. Nickerson, Pres. Vil. Council.

HAMILTON, MINN.—The Council has taken action to bond the village for the purpose of aiding in building a bridge across Minnesota River at this point.

MINNEAPOLIS, MINN.—The Minneapolis, St. Paul & Sault Ste. Marie R. R. Co. will build three bridges this spring and summer, two across Snake River at Warren and the third across Red River north of Northland, Minn. E. Pennington is Gen. Mgr., City. The bridge across Red River will be 1,300 ft. long and will have a 240-ft. draw.

TOPEKA, KAN.—Bids are asked by County Commissioners until March 13, noon, for building three steel bridges as follows: One 32 ft. straight rail bridge over Disney Creek; one 40 ft. low truss bridge over Half Day Creek; one 60 ft. low truss bridge over Wakarusa Creek. Plans and specifications may be seen at office of A. Newman, County Clk.

NEWTON, KAN.—Bids are asked by County Clerk until March 20 for construction of two bridges across Mud Creek in Macon Township.

WICHITA, KAN.—Council has approved City Engineer's preliminary estimate of cost of raising and extending Greiffenstein bridge over Little Arkansas River. H. J. Harding, Cy. Engr.

KANSAS CITY, MO.—Bernard Corrigan, Pres. Kansas City Ry. & Light Co., is reported as stating that plans for James St. viaduct have been completed, and that the contract for construction would be let at once. Est. cost, $80,000.

RICHLAND, ARK.—Bids are reported asked by Geo. Wufing, of Richland Center, until May 1 for building a steel bridge over Wisconsin River at Tone Rock.

JASPER, TEX.—It is reported that the Atchison, Topeka & Sante Fe R. R. Co. has sent out specifications asking for bids on masonry piers for new steel bridge to be constructed over Sabine River on Jasper & Eastern Railroad. The approximate cost of new bridge will be $100,000. A. F. Robinson is Bridge Engr., Topeka, Kan.

ROSENBURG, TEX.—Steps have been taken looking to the construction of a bridge across Brazos River near here. County Judge, of Richmond, Tex., can inform.

SANTA FE, N. MEX.—Bids may soon be asked by County Commissioners for building a three-arch stone bridge over Santa Fe River. J. L. Zimmerman is County and Cy. Engr.

ABERDEEN, WASH.—It is stated that A. J. West has let contract to PACIFIC CONSTRUCTION CO., of San Francisco, Cal., for building steel draw, two steel draw spans and the concrete piers for Chehalis River bridge.

SPOKANE, WASH.—Bids are asked by County Commissioners until April 4 for constructing steel bridge No. 22 on Marsh Road over Latah Creek. E. Stewart, Clk.

TACOMA, WASH.—The County Commissioners expect to replace this season the Lukenbill bridge across Touchet River by a 200-ft. span bridge; also construct a bridge 500 ft. long over Walla Walla River. Early construction is assured.

SALEM, ORE.—Citizens of this city will soon vote upon the issuance of $20,000 bonds for the building of a cement double-arch bridge over Mill Creek in Commercial St.

CLIFTON, ARIZ.—The new steel bridge of Arizona & New Mexico over San Francisco River has been carried away by floods. E. Schumann is Supt., City.

LANARK, ONT.—Contract for constructing steel bridge over Clyde River was awarded to JENKS & DRESSER.

LONDON, ONT.—T. E. Robson, County Clk., informs us that bids will be received some time in April for constructing a steel bridge over Thames River. Est. cost, $4,300. Chas. Talbot is Engr., City.

TORONTO, ONT.—The City Engineer recommends that application be made to Railway Commission for permission to erect a high level bridge at the Don, Queen St., at a cost of $195,000, and to construct a subway at the G. T. R. crossing, Queen St., east, at a cost of $100,000.

FREDERICTON, N. B.—Bids are asked by C. H. La Billois, Comr. Pub. Wks., until March 13 for rebuilding bridge over Northwest Miramichi River.

***Information concerning contracts to be let or supplies to be furnished, and corrections of errors and omissions in published items, are invited. Full details regarding the equipment, tools, etc., required for the proposed improvements are specially desired.***

MOSCOW, IDAHO.—Bids are asked by County Commissioners until April 19 for constructing a bridge across Bear Creek and one across Paradise Creek. Axel Hamstedt, Clk.

WINNIPEG, MAN.—The Sault Ste. Marie road, which is operated by the Canadian Pacific, [illegible] to construct a bridge over Red River about 20 miles north of Grand Forks. It will require 26,000 lin. ft. of [illegible] and 400,000 ft. of bridge timber.

## BUILDINGS.

*The names of parties awarded contracts are printed in capital letters.*

BEVERLY, MASS.—City may issue bonds for [illegible],000 for a new grammar school. A new high-school building is under consideration, it is reported. A. L. [illegible] is Supt. of Schools.

NEW BEDFORD, MASS.—Bids are asked until noon, March 13, for building New Bedford Textile school addition. William E. Hatch, Chn.; Nat C. Smith is Arch.

PROVIDENCE, R. I.—City will seek authority to borrow $175,000 with which to establish a city hospital. Henry Fletcher is Chn. Council Com.

NEW YORK, N. Y.—Members of New York Cotton Exchange have voted to appropriate $94,000 to cover cost of alterations to present building.

The Port Morris Market Co., a new corporation represented by Palen, Tully & Hoppock, of 115 Broadway, has bought nearly four blocks of land, comprising about 95 lots, in the Port Morris section of the Bronx, and will establish there a new public market. Cost, it is said, will be about $600,000.

Michael J. Garvin, Arch., 3307 Third Ave., will have plans ready for bids about March 15 for a theater which will be erected at Franklin Ave. and 165th St., Boro. of Bronx. The Bronx Theater Co., care Max Wy[illegible], 935 Home St., is owner. Cost, about $175,000.

NEW YORK, N. Y.—Plans have been filed by G. F. Pelham, Arch., 503 Fifth Ave., for two 6-story flats, on 111th St., for Jacob Kolowsky, 60 West 117th St. Cost, $110,000.

By same architect for three 5-story flats and stores at Eighth Ave. and 147th St., for G. J. Fleischman, 160 West 120th St. Cost, $134,000.

By same architect, for a 6-story brick flat, 75 × 90 ft. at Madison Ave. and 96th St., for W. F. Rohrig, 112[illegible] Park Ave. Cost, $175,000.

By Lawlor & Haase, 69 Wall St., Archs., for two 6-story brick flats, 125 × 87 ft., on 111th St., for Markenfield Construction Co., 26 Cortlandt St. Cost, $200,000.

By Moore & Landseidel, Third Ave. and 148th St., Archs., for two 5-story brick flats, 64 × 87 ft., on 136th St., for Transit Realty Co., 198 Broadway. Cost, $150,000.

NEW YORK, N. Y.—Robert Maynicke, Arch., 298 Fifth Ave., will prepare plans for an 11-story building to be erected at Broadway and 20th St. Henry Corn, 1170 Broadway, is owner.

The Title Guarantee and Trust Co., 146 Broadway, will erect a 6-story building, at 176-178 Broadway. It will cost about $500,000. Clarence H. Kelsey is Pres.

Grosvenor Atterbury, 20 West 43d St., is architect for the two groups of tenements to be erected by Henry Phipps. One site is on 31st St., east of Second Ave., the other on 63d and 64th Sts., east of West End Ave. Dr. E. R. L. Gould, 281 Fourth Ave., is Trustee.

BROOKLYN, N. Y.—An addition will be built to Boys' High School at Putnam and Marcy Aves. It will cost about $150,000. C. B. J. Snyder is Supt. Schools, Bd. Education.

NEW YORK, N. Y.—The Evening Post Co. will erect a 13-story fireproof building at 20-24 Vesey St. Robert D. Kohn, 170 Fifth Ave., will prepare plans, it is reported.

Trowbridge & Livingston, Archs., 724 Fifth Ave., have filed plans for new Altman building on Fifth Ave., 34th to 35th Sts. It will be eight stories high, 197½ × 275 × 325 ft. Estimated cost, $2,500,000. MARC EIDLITZ & SON, 489 Fifth Ave., have the general contract.

ALBANY, N. Y.—H. H. Bender, Fiscal Superv. of State Charities, in his annual report to the Legislature, recommends a special appropriation of $517,000 for new buildings and improvements, to include the enlargement of the dormitories at the Rome State Custodian Asylum, at Newark, and the enlarging of the institutions at Sonyea, Albion and Bedford.

BUFFALO, N. Y.—"Providence Retreat," at Main St. and Kensington Ave., is to be replaced by a new building. Negotiations are under way at present by the Sisters of Charity. This order is in charge of the institution. Esenwein & Johnson, 781 Ellicott Sq., are Archs.

William D. Walker, Bishop of Western New York diocese, at Buffalo, has announced that a $1,000,000 cathedral will soon be built in this city.

Congress has appropriated $30,000 toward construction of a $125,000 marine hospital in Buffalo.

BUFFALO, N. Y.—Charles M. Morse, Deputy Engr. Comr. of Dept. of Public Works, has submitted report to Mayor in connection with cost of proposed union station. It is estimated that it will cost the city $9,515,270; building alone will cost about $5,960,000. George Cary, 184 Delaware Ave., is Arch.

WEST HAVERSTRAW, N. Y.—Legislature will be petitioned by the New York State Hospital for the Care of Crippled and Deformed Children, of which Bishop Henry C. Potter is Pres. of the Board of Managers, for an appropriation of $200,000 for the erection of a modern hospital building on 50-acre farm here.

NEW YORK, N. Y.—Following are two lowest bids received March 6 for sanitary work and gas fitting of De Witt Clinton High School: James Harley, 288 Flatbush Ave., Brooklyn, N. Y., $48,431; W. H. Spellman, 112 W. 38th St., New York, $45,411. For construction, including plumbing and drainage of new Public School 65, on Forsyth and Eldridge Sts., the three lowest bidders were as follows: R. E. Heningham, 4 Court Sq., Brooklyn, $408,000; Thomas Cockerill & Sons, 147 Columbus Ave., New York, $418,500; P. J. Brennan, 1931 Broadway, New York, $419,000.

Bids are asked by Nicholas J. Hayes, Fire Comr., until 10.30 a. m., March 16, for additions and alterations to new building for Engine Co. 131, on Watkins St., Boro. Brooklyn.

SALEM, N. Y.—Bids are asked by Frank A. Hill, Clk. Bd. of Education, until 7.30 p. m., March 17, for repairing and remodeling Washington Academy, and building an addition thereto, according to plans prepared by Edward Ball, Arch., Glens Falls, N. Y.

SPENCER, N. Y.—Bids are asked until March 1[illegible] by Pierce & Bickford, Archs., 120 Lake St., Elmira, N. Y., for erecting a brick school building. Bids on heating, ventilation and plumbing will be received separately.

TRENTON, N. J.—A bill is before state senate which provides for removal of Wing No. 3 at state prison and construction of a new cell house at cost of $250,000. Measure was introduced by Senator McKee.

HILADELPHIA, PA.—Horace Trumbauer, Arch., Land e Bldg., has prepared plans for an apartment house, cost about $2,000,000, at 215-225 South 16th St.

e Academy of Natural Sciences plans an addition to building at 19th and Race Sts. Est. cost, $200,000. gislature will be asked to appropriate that sum.

RING CITY, PA.—Philip H. Johnson, Fidelity Bldg., adelphia, Arch., has prepared plans for the $1,000,000 e Hospital for Feeble-Minded and Epilpetics to be ted here. John M. Scott is Pres. of Comn. The lings will be of brick, with stone trimmings and will of approved fireproof construction.

HILADELPHIA, PA.—Legislature will consider propo- on to appropriate $200,000 for the erection of a normal industrial school for negroes. Representative Dunn, Philadelphia, has introduced bill.

ANCASTER, PA.—State may appropriate $100,000 for school to be known as the Thaddeus Stevens Industrial d Reform School. It will be built in this city.

ITTSBURG, PA.—It is reported that the Homeopathic spital of Pittsburg will spend $600,000 for a site for its w hospital to be located in the East End. A bill which presentative L. B. Cook has introduced asks the state appropriate $200,000 upon condition that the money e not available until $400,000 has been subscribed in sburg. Dr. J. H. McClelland is interested.

ITTSBURG, PA.—The Schenley farm in Oakland has n sold. It is reported that a model city will be built that the project will involve the expenditure of $10,-000,000 for improvements and buildings. The sale was made through Andrew Carnegie, Denny Brereton and John W. Herron, trustees under the will of Mrs. Mary E. Schenley, deceased, of England. Buyers are F. F. Nicola, A. G. Nicola, O. P. Nicola and Charles Donnelly, of Pittsburg.

The Salvation Army will erect a $250,000 citadel here. Col. R. E. Holz is interested.

McKEESPORT, PA.—A contract has been let to the GEORGE HOGG CO., Braddock, Pa., by Charles Reuben, for the erection of a $150,000 business block at Fifth Ave. and Walnut St., McKeesport. The building will be four stories high, of steel and brick.

DELAWARE CITY, DEL.—Bids are asked until March 29 for installing screen doors and windows on buildings at Fort Mott, N. J. Capt. Louis F. Garrard, Jr., Q. M., U. S. A. (Advertised, Engineering News.)

BALTIMORE, MD.—Wm. H. H. Sultzer, Secy. Centre Market Comn., City Hall, informs us that bids are asked until March 22 for erecting proposed new market houses. Gen. Felix Agnus is Chn.

PORT DEPOSIT, MD.—The Jacob Tome Institute has awarded contract to HENRY SMITH & SONS CO., 116 South Regester St., Baltimore, Md., for the construction of a dormitory. Wyatt & Nolting, Archs., 2 East Lexington St., Baltimore.

WASHINGTON, D. C.—Sunderland Brothers, Washington Savings Bank Bldg., real estate brokers and architects, have bought from the Chevy Chase Land Co. sites in Fernwood, on which they propose to erect villas ranging in price from $8,000 to $12,000. The scheme contemplates the ultimate erection of 60 of these residences, to cost about $1,500,000. Work will begin at once.

RICHMOND, VA.—Y. M. C. A. Association will erect a building to cost $105,000.

CLARKSBURG, W. VA.—Board of Trade has offered to legislature a site valued at $100,000 for capitol building.

NEW MARTINSVILLE, W. VA.—Bids are asked until noon, March 25, for erection of Masonic temple, 50 × 118 ft., four stories high. James P. Chaplin is Arch. F. W. Clark is Pres. Masonic Temple Association.

CHARLESTON, S. C.—William M. Aiken, Arch., 33 Union Sq., New York, has prepared plans for hospital buildings for the Roper Hospital. We are informed that bids probably will be taken in about two weeks. Walker & Chambers, 50 East 20th St., New York, are Consult. Engrs.

JACKSONVILLE, FLA.—Y. M. C. A. may build a $100,000 clubhouse. Charles H. Smith is Treas.

ALEXANDRIA, LA.—A $100,000 hotel will be erected on Second St. J. P. Turregano is interested.

NEW ORLEANS, LA.—Young Men's Hebrew Association will have plans prepared for rebuilding the Athenaeum. Harold W. Newman is member of committee.

NEW ORLEANS, LA.—The Hotel Royal is to be restored, according to press report, at cost of $250,000. D. Mercier is interested.

KNOXVILLE, TENN.—R. L. Chiles, T. E. Black, W. P. Chandler, C. C. Lotspiech, R. F. Cross, W. P. Richards, A. Y. Burrows, Harmon Kreis, R. Knaffl and D. R. Samuel have applied for charter for a $100,000 company which contemplates construction of 6 or 7-story Masonic Temple on site to be purchased.

CHATTANOOGA, TENN.—GEORGE BAKER LONG, Buffalo, N. Y., informs us that he has contract for a 5-story brick and stone apartment house, 103 × 135 ft., for J. T. Lupton. Mentioned in Engineering News on Feb. 16. Cost, $125,000. Sub-contracts for stone, granite, Indiana limestone, marble, sheet metal and roofing, cast iron, brick, painting, fireproofing, plastering, hardware, plumbing and heating, electrical work, carpentry will be handled from Mr. Long's office in Lexington City National Bank Bldg., Lexington, Ky.

MEMPHIS, TENN.—N. C. Perkins, W. G. Allen, John Colbert, John T. Walsh and Levi Joy have been named as the Board of Commissioners who will have charge of the erection of the new $1,000,000 court house for Shelby County.

MEMPHIS, TENN.—The Memphis Terminal Association will have plans prepared for union station. E. B. Lenaster is Chn.

BOWLING GREEN, KY.—A public building, to cost about $100,000, will be erected.

CLEVELAND, O.—William Taylor, Son & Co. will erect a $400,000 4-story building on Euclid Ave.

TOLEDO, O.—H. J. SPIEKER & CO. has contract for new building for A. W. Colton on Madison Ave. Cost, $100,000.

CINCINNATI, O.—Bids are asked by Cincinnati Southern Ry. Trustees, Stanley Ferguson, Secy., until April 3 for construction complete of freight station between Vine and Plum, Commerce and Front Sts., Cincinnati. Building is to be built of concrete. (Advertised, Engineering News.) Plans and specifications are on file at office of Engineering News, Monadnock Bldg., Chicago. G. B. Nicholson is Engr. and Supt. for Trustees.

TOLEDO, O.—Contract for erecting Nicholas building has been awarded to A. BENTLEY & SONS. The iron and steel contract was awarded to the DONOVAN WIRE & IRON CO., of Toledo. Other sub-contracts are as follows: Plastering, JOHN McCAFFERY; electrical installation, WINTERS ELECTRICAL CO.; plumbing, EAGAN BROS.; generators, BISSELL & CO.; marble, NORCROSS & CO., Cleveland; glass, STAR HARDWARE CO.; fireproofing, NATIONAL SUPPLY CO., Chicago; terra-cotta, ATLANTIC WORKS, New York; brick, TOLEDO BUILDERS' SUPPLY CO.

INDIANAPOLIS, IND.—A bill has been passed, it is reported, by the legislature providing for an appropriation of $560,000 with which to build a new and additional hospital for the insane. A commission appointed by the governor will prepare plans, receive bids and let the contract.

SOUTH BEND, IND.—Bids will be received by S. S. Bewan, Arch., 203 Michigan Ave., Chicago, for erection of $200,000 Y. M. C. A. building in South Bend. Previously noted.

PRINCETON, IND.—The Cumberland Telephone Co. will erect a new office and exchange building in this city. Leland Hume, of Nashville, Tenn., Asst. Gen. Mgr., is interested.

MARION, IND.—A $100,000 court-house will be erected by government.

GRAND RAPIDS, MICH.—Michigan Soldiers' Home board of managers will ask legislature for an appropriation of $100,000 for the erection of a new hospital building. Plans have been submitted by Osgood & Osgood, Grand Rapids, and Raseman & Fisher, Detroit. Louis Kanitz, Muskegon, Mich., is Chn. Com. on Buildings.

GRAND HAVEN, MICH.—Bids are asked by James Knox Taylor, Supervising Arch., Treasury Dept., Washington, D. C., until March 22, 3 p. m., for installing plumbing system in post office and custom house building.

CHICAGO, ILL.—Holabird & Roche, Archs., Monadnock Bldg., have prepared plans for Mrs. Charles Netcher, proprietor of Boston Store, who will erect office buildings on block bounded by State, Dearborn, Madison and Washington Sts. The buildings will be erected in five sections. It is estimated that total cost will be $3,000,000.

Aaron E. Nusbaum of the Phoenix Horseshoe Co., 517 Rookery Bldg., and others, contemplate the erection of a large mercantile building at 309 South Clark St., and adjoining property. It will be ten stories and will be so constructed that five or more stories may be added when required. The structure will be of steel construction. Estimated cost, $250,000.

SPRINGFIELD, ILL.—Illinois district, of the United Mine Workers of America, will erect a $300,000 building in this city.

MADISON, WIS.—Plans for $250,000 high-school building have been prepared by Cass Gilbert, 79 Wall St., New York.

CHICAGO, ILL.—Bids are asked, it is said, until March 20 for constructing superstructure of a 3-story and attic bank building, to be erected at La Salle and Monroe Sts. for the Northern Trust Co., 217 La Salle St. Frost & Granger, 184 La Salle St., are Archs. Estimated cost, $1,000,000.

MADISON, WIS.—Improvement items in legislative budget, for which appropriations are now under consideration, provide for an addition to state prison to cost $100,000; an addition to hospital for violent and criminal insane, $100,000; an addition to Home for Feeble-Minded at Chippewa Falls, $100,000; new cell wing at Green Bay state reformatory, $80,000.

MILWAUKEE, WIS.—Bill is before legislature providing for $240,000 appropriation for building a new normal school in this city.

MILWAUKEE, WIS.—A music-hall is to be erected at cost of $500,000. It will be, in part, under control of city.

MARSHALLTOWN, IA.—Masonic Temple Association will erect a $100,000 temple. J. L. Carney is Pres:; Byron Webster is Secy.

MT. VERNON, IA.—Cornell College trustees will undertake to raise $250,000 for new buildings. W. F. Johnson, of Toledo, James E. Harlan and H. H. Freer, of Mt. Vernon, have been appointed a committee.

SIOUX CITY, IA.—The Great Northern Ry. Co. may erect a $500,000 station and terminal. A. F. Call is local representative of company.

WATERLOO, IA.—Bids are asked by James Knox Taylor, Supervising Architect, Washington, D. C., until March 30, for low temperature hot-dater heating apparatus, complete in place, for the U. S. Post Office and Court House at Waterloo, Ia.

BISMARCK, N. D.—A bill, providing for the reconstruction and final completion of the state capitol building and the appointment of a commission has been passed by legislature. This bill makes available from $800,000 to $1,000,000 for the work of completing the capitol.

CHEYENNE, WYO.—W. S. Scott, Q. M., informs us that bids received for constructing ten post buildings were as follows: M. P. Keefe, Cheyenne, Wyo., $215,729; Russell & Walker, Colo. Springs, Colo., $216,598; A. I. Gray, Denver, Colo., $210,485; Brown & Schrepferman, Denver, Colo., $224,421; Stocker & Fraser, Denver, Colo., $222,805; Ziegler & Dalton, Junction City, Kan., $212,750; J. B. Betts, Topeka, Kan., $215,668; Fraser, Richardson & Co., Denver, Colo., $214,906; J. W. Atkinson, Colorado Springs, Colo., $225,000; C. E. McGarvey, Cheyenne, Wyo., $212,400.

RAWLINS, WYO.—A public building, to cost $100,000, will be erected. Plans will be prepared by James Knox Taylor, Supervising Arch., Treasury Dept., Washington, D. C.

HANNIBAL, MO.—Barnett, Haynes & Barnett, Archs., Frisco Bldg., St. Louis, have plains for Mark Twain Hotel. Cost, $60,000.

KANSAS CITY, MO.—C. A. Smith, Arch., Dwight Bldg., has prepared plans for Humboldt school, which will be built at 11th and Holmes Sts.

CORSICANA, TEX.—Navarro County will erect a new court-house, for which $150,000 of bonds has been voted.

DENVER, COLO.—The Symes estate will erect a fireproof, 8-story, brick and stone office building at 16th and Champa Sts. Cost, $450,000. A. E. Hart is representative of estate.

The Colorado Building & Investment Co. will erect a $400,000 building at 17th and Champa Sts. Henry M. Porter is interested.

Joel W. Shackelford, 832 17th St., has purchased the site for an actors' home. It will be modeled after the Phipps sanitarium which cost about $300,000.

F. E. Edbrooke, Arch., 510 Opera House Block, is reported to be preparing plans for a $300,000 building to be erected at 15th and Champa Sts. for the Fifteenth St. Improvement Co.

F. E. Edbrooke, Arch., will draw plans for an 8-story fireproof office building to be erected at 16th and Tremont Sts. It will cost $350,000.

**SEATTLE, WASH.—N. W. White, Arch., has drawn plans for an office building to be erected by I. E. Moses at estimated cost of $175,000. It will be ten stories high.** New Y. M. C. A. building is to be built at Fourth Ave. and Madison St. It will cost $175,000. James Stephen, New York block, is Arch.

PUEBLO, COLO.—R. S. Roeschlaub & Son, Denver, Archs., have plans for new high school building. Est. cost, $300,000. John Gile, Arch., Pueblo, is in charge of construction work.

SEATTLE, WASH.—Contract for addition of three stories to the Masonic Temple has been let to McCLELLAN & CO., at $95,000.

Contracts were let for adding three stories to the Peoples' Savings Bank to McCLELLAND & CO., contractors. Cost, $150,000. Bebb & Mendel, Archs.

ST. JOHNS, ORE.—W. W. Goodrich, of Goodrich & Goodrich, Archs., Portland, has drawn plans for a technical high-school building to be built here. It will be 194 × 94 ft., three stories high.

SAN JOSE, CAL.—Garden City Bank & Trust Co. will erect a 7-story, fireproof building at First and San Fernando Sts. Cost, $150,000.

SACRAMENTO, CAL.—A bill has been passed by Senate appropriating $35,000 for the erection of a domestic science building at the California Polytechnic School. Also a bill appropriating $250,000 for improvements at the California Polytechnic School.

SAN DIEGO, CAL.—Articles of incorporation have been filed by the Wyatt Theater Co., with a capital of $100,000, for the purpose of erecting and maintaining a theater in this city. H. C. Wyatt, of Los Angeles, is one of the directors of the company.

LOS ANGELES, CAL.—The Auditorium Co. has been incorporated with $600,000 capital. Company will erect a $350,000 building at Fifth and Olive Sts. E. W. Davies, W. S. Patterson, D. K. Edwards, Leslie W. Gray and others are named as incorporators.

John C. Austin, Douglass Bldg., it is reported, has prepared plans for a $200,000 hotel which is to be erected by Porter & Seemens.

OAKLAND, CAL.—It is reported that Trustees of the Merritt Hospital will spend $100,000 in constructing new buildings.

FORT WINFIELD SCOTT, CAL.—Proposed construction work during 1905, and estimate of cost is as follows: One commanding officers' quarters, brick, $15,000; two field officers' quarters, brick, $17,800; six captains' quarters, brick, $58,500; four lieutenants' quarters, brick, $30,000; one eight-set bachelor officers' quarters, brick, $30,000; six non-commissioned staff officers' quarters, brick, $18,600; one twelve-bed hospital, brick, $18,759; one guardhouse, brick, $17,500; one administration building, brick, $15,800; one subsistence storehouse, brick, $11,500; one quartermaster's storehouse, brick, $16,000; one stable (30 animals), brick, $6,500; one wagon shed, frame, $1,850; one fire engine house, brick, $1,850; one quartermaster's shop, brick, $3,750; seven coast artillery barracks, brick, $245,000. (Post-office, Presidio of San Francisco, Cal.)

SAN FRANCISCO, CAL.—It is proposed to build the following post buildings at the Presidio this year, it is reported: Two sets field officers' quarters, brick, $27,500; two double sets captains' quarters, brick, $39,000; three double sets lieutenants' quarters, brick, $45,000; four cavalry stables, frame, $36,000; three field artillery barracks, $120,000.

SAN FRANCISCO, CAL.—THE AMERICAN BRIDGE CO., represented in San Francisco by Fred. R. Muhs, 103 Crocker Bldg., has been awarded the contract for 3,000 tons of architectural steel for the new 12-story brick, stone and steel, Emma Butler building, which is to be erected at Geary and Stockton Sts. This material is to be delivered in June.

-SAN FRANCISCO, CAL.—The members of the Golden Gate Commandery, No. 16, Knights Templar, it is reported, have decided to build an asylum on Sutter St., to cost about $72,000. The building committee consisting of Frank W. Sumner, Charles L. Field, Robert McMillan, William S. Miller and Henry C. Bunker, has been authorized to request architects to submit plans. A premium may be awarded for plan accepted.

BOISE, IDAHO.—Four new buildings may be provided for University of Moscow in $115,000 state appropriation.

ST. BONIFACE, MAN.—C. E. Marchant, Arch., Montreal, Que., is preparing plans for a cathedral for St. Boniface. This structure will cost about $200,000, it is reported.

WINNIPEG, MAN.—St. Mary's parish may build a $150,000 stone church this year. Rev. Father X. Portelance is interested.

## WATER SUPPLY AND IRRIGATION.

*The names of parties awarded contracts are printed in capital letters.*

PEAK ISLAND, ME.—Peak's Island Water Co., according to reports, is to make several changes to its plant this spring. Stand-pipe is to be erected.

ORONO, ME.—Orono Water Co., Chas. N. Taylor, Treas., is to install water-works here this spring, according to reports.

BOSTON, MASS.—Bids are asked by Major John E. Baxter, Q. M., U. S. A., until April 6 for material and labor for construction of submarine pipe line from Nut Island to Peddocks Island, Mass., for 6-in. water main on Peddocks Island and a post water system at Fort Andrews, Boston Harbor, Mass. (Advertised, Engineering News.)

PEABODY, MASS.—We are informed that it will be some weeks before decision is reached as to expending $120,000 for improvement of town water system.

PITTSFIELD, MASS.—We are informed that nothing definite has been done this year regarding construction of distributing reservoir on Washington Mt. A. A. Forbes is Engr., Bd. Pub. Wks.

SOUTH NORWALK, CONN.—Referring to projected filter plant, bids for which were received Feb. 15 and were rejected, S. W. Hoyt, Jr., Cy. Engr., writes us that the $60,000 appropriation proved inadequate to build filter according to the approved plans. An additional appropriation of $15,000 was asked but was voted down in the special city meeting. No further steps have been taken as yet. W. S. Johnson, State House, Boston, Mass., is Des. Engr.

NIAGARA FALLS, N. Y.—We are informed that city will improve its water-works in the near future either by installing new pumps or by building entirely new pumping plant with filters. W. W. Read is Cy. Engr.

ONEIDA, N. Y.—We are informed that project of bringing soft water from Vienna for this city has been dropped for the present.

ALLEGHENY, PA.—See under Sewerage.

DUQUESNE, PA.—We are informed that matter of increasing water supply of this borough has been under discussion.

DUBOIS, PA.—We are informed that some water mains will probably be extended this year. R. Dawson Hall is Boro. Engr.

PHILADELPHIA, PA.—We are informed that the only new work in contemplation this year by Bureau of Water, Department of Public Works, Peter E. Costello, Director, is the extension of the distribution mains at an estimated cost of $200,000.

SAXTON, PA.—This place has voted to issue $20,000 of bonds for erection of municipal water-works. W. E. Brenernan, Secy. Council, writes us that plans and specifications have not been made as yet, nor has the engineer been selected, the matter awaiting final decision of council as to whether work will be done this year.

SPARTANBURG, S. C.—J. B. Cleveland, Pres. Home Water-Works Co., is stated to have let contract to W. T. McCORMICK, Charlotte, N. C., for building a supplemental water supply to present plant. New supply will be secured from Shoaly Creek, 5½ miles west of the city, and the pipe line is being laid. In addition to the pipe extension, a filtering plant of 1,500,000 gallons capacity daily will be installed at the pumping station of the present plant.

ABERDEEN, MISS.—Bids are asked until March 22 for laying seven miles cast iron pipe, building brick power house, masonry reservoir, deep well, air compressor, 18 × 42 Corliss engine, setting machinery and five miles 8-in. to 15-in. sewers. ~~A. L. Dabney, Engr., Greenwood, Miss.~~; J. M. Acker, Mayor. (Advertised, Engineering News.)

INDIANOLA, MISS.—Town Council has awarded contract for laying 10,000 ft. of water mains to W. C. PORTER, Laurel, Miss.

MARION, KY.—The Mayor writes us that nothing has been done as yet toward water-works for this place, except to have preliminary survey and report made, with view of submitting to vote question of bond issue for construction of system. Granberry Jackson, Nashville, Tenn., is Des. Engr.

HOPKINSVILLE, KY.—W are informed that Hopkinsville Water Co., Thos. W. Morris, Mgr., proposes to make a lake by means of dam about two miles from city.

PORTSMOUTH, O.—We are informed that a special electric will be held April 10 to vote on bond issue of $250,000. If issue carries, plans and specifications for new water-works will be prepared at once. J. W. Smith is Chn. Council Water Com.

CLEVELAND, O.—Bids are asked by Board Public Service, A. R. Callow, Secy., until March 21 for furnishing fire hydrants and cast-iron water valves. (Advertised, Engineering News.)

CEDARVILLE, O.—We are informed that no steps have been taken as yet toward letting contracts for construction of water-works of Cedarville Water-Works Co. Supply is to be obtained from spring three miles from city, and est. cost of works is $40,000. Among other things, two hydraulic pumps of capacity of 120,000 gallons per day each for pumping from overflow weir reservoir will be required. Robt. Hood, Consult. Engr., is official in charge. (Mentioned in our issue of Feb. 2.)

ALPENA, MICH.—Bids are asked until March 23 for construction of water-works and electric lighting plant for this city. Work requires two 3,000,000-gallon pumping engines, 2,000 ft., 40-in. riveted steel conduit pipe, 300 ft., 16¼-in. riveted steel pipe and specials, 44,400 ft., 6-in. to 24-in. cast iron pipe, gate valves, hydrants, etc.; also laying of mains, construction of submerged crib, etc. Electric light plant requires erection of pumping and electric station, furnishing and erection of two compound condensing engines, two 300-KW. turbine units, forty 5-KW. transformers, lamps, poles, wire, etc. John H. Bloomshield, Engr., Bay City, Mich.; Frank C. Holmes, Mayor; R. J. Crable, Cy. Recdr. (Advertised, Engineering News.)

ESCANABA, MICH.—Escanaba Water Co., W. J. Hatton, Supt., will, it is stated, expend $20,000 this year for improvements, to include extension of intake and laying of new mains.

GRAND RAPIDS, MICH.—We are informed that the Board of Public Works has decided to ask the Common Council to submit to vote of people proposition to go up the river about three miles for a new intake and there filter the water before bringing it to the present pumping station through a conduit. The cost is estimated at about $700,000. L. W. Anderson is Cy. Engr.

ROCKFORD, ILL.—Frank J. Phinney, Supt. W.-W., writes us that all bids received March 4 were rejected as being too high, and new proposals are asked until 1 p. m., March 11, on 200 tons 6-in. cast-iron pipe, f. o. b. Rockford.

MENASHA, WIS.—Contract for material for municipal water-works, bids for which were received Feb. 23, are stated to have been let as follows: Power pumps, GOULD CO., New York; hydrants, valves and connections, LUDLOW HYDRANT CO., Chicago, Ill.; cast iron pipe and castings, U. S. CAST IRON PIPE & FOUNDRY CO., Chicago, Ill., engines, AMERICAN DEISEL ENGINE CO., New York; wrought iron pipe and fittings, JOHN DAVIS CO., Chicago, Ill., pig lead and jute, RAYMER LEAD CO., Chicago, Ill.

WEST ALLIS, WIS.—B. W. Quillan, Chn. Water Com., writes us that an election will be held March 25 to vote on $60,000 bond issue, proceeds of which will be used to pay for work in connecting with water system of Milwaukee.

CHETOPA, KAN.—Mayor J. B. Cook writes us that city will vote April 4 on bond issue for water and electric light plants.

OAKES, N. DAK.—Bids are reported asked by W. S. Wickersham, Cy. Audr., for complete system of water mains and a system of sewers.

CODY, WYO.—We are informed that Big Horn Basin Development Co., S. L. Wiley, Pres., and G. W. Zorn, Ch. Engr., is advertising until April 3 for construction of 16 miles of canals. Contracts for additional canal work and about 7,500 ft. of tunnel work are also to be let in the near future.

FORT WORTH, TEX.—Contract for furnishing city with about 200 tons of 12-in. pipe for municipal water-works has been let to JOHN L. WORTHAM, Austin, Tex., Financial Agent of State Penitentiary, where the pipe will be made.

EAGLE LAKE, TEX.—T. L. Smith, according to reports, proposes to install water-works; company capitalized at $25,000 is reported to have been chartered.

DENNISON, TEX.—W. J. Mathis, Atty., representing J. R. Shaughnessy, Chicago, Ill., has applied for water-works franchise here.

SAN ANTONIO, TEX.—Bids are asked by Robt. R. Stevens, C. Q. M., until March 29 for construction of water distributing system at Fort Sill, Okla. T.

ANAHUAC, TEX.—Lone Star Canal Co., recently organized with $300,000 capital, is to establish irrigation system near here. T. O. Emerson, Titusville, Pa., and F. M. Hamilton, Anahuac, are interested.

BERTHOUD, COLO.—Hendy Ditch Co., J. H. Welty, Pres., J. Y. Munson, Secy., proposes to spend $75,000 this year for improvements. A reservoir and ditches will be constructed.

MEEKER, COLO.—Specifications for construction of water-works for this town may be seen at office of Engineering News, 220 Broadway, New York. Bids are [illegible] until March 20, as advertised in Engineering News.

BLAINE, WASH.—City council has granted [illegible] franchise to H. L. Jenkins of the Jenkins Lumber [illegible] Minnesota corporation.

PORT TOWNSEND, WASH.—Bids are asked until March 24 for constructing boiler and pump [illegible] pumping machinery, tank trestle, caisson, wells, [illegible], etc., at Fort Casey, Wash. Geo. H. Penrose, [illegible], U. S. A.

SEATTLE, WASH.—Contract for construction [illegible] water main in Phinney Ave. has been let to PACIFIC COAST PIPE CO., Ballard, Wash., for $28,224.

SAUSALITO, CAL.—We are informed that project for voting $100,000 of bonds for municipal water-works was defeated at recent election.

ANAHEIM, CAL.—C. O. Rust, Chn. Council, writes us that City Trustees contemplate enlargement of pumping plant and electric light plant. Nothing definite has been done as yet.

CHICO, CAL.—Bids are asked by H. R. Batchelder, Clk. Supervisors, until March 13 for furnishing pipe for water mains as follows: 2,500 ft. 4-in. Mathewson patent lock joint pipe; 1,700 ft. 3-in. Mathewson patent lock joint pipe; 96 ft. 3-in.; 72 ft. 2½-in. threaded wrought iron pipe; 2,500 ft. 4-in. and 1,700 ft. of 3-in. redwood pipe, wire bound.

PASADENA, CAL.—We are informed that a bond election will probably be held this month, regarding proposition for taking over water systems of local companies.

WHITTIER, CAL.—We are informed that bond election is to be held March 14 to vote on proposition to issue $110,000 of bonds for new water-works. Frank H. Olmstead, Los Angeles, Cal., is Engr.

HARRISON, IDAHO.—Local water company, according to reports, will expend about $25,000 for improvements, to include new pumps and extension of intake.

ELSINORE, UTAH.—Brooklyn Water Development Co. has been incorporated with $20,000 capital. J. H. Lowe, Austin, Utah, is Pres., and R. A. Lowe, Austin, is Secy.

PLEASANT VIEW, UTAH.—Rock Canyon Water Co. has been incorporated with $42,000 capital. M. C. Newell is Pres. and D. H. Jones, Secy. (Postoffice, North Ogden, Utah).

SALT LAKE CITY, UTAH.—We are informed this city has sold $850,000 of water bonds, the proceeds from which are to be used in acquiring the rights to the water in Big Cottonwood Creek and other mountain streams near this city, and in constructing a conduit about seven miles long to deliver the water to this city. The city engineer's office, George W. Riter, Cy. Engr., is now engaged on plans for a reinforced concrete-steel conduit of circular cross-section of 4½ ft. diameter. On certain portions of the line riveted steel pipe will be substituted for the reinforced concrete. The plans also include a diverting dam at inlet of conduit and an electric generating plant to be located at outlet of conduit and to have about 300 KW. electrical output.

EAST TORONTO, ONT.—Bids are asked by W. H. Clay, Town Clk., until March 13 (extension of time) for materials and labor for erection of reinforced concrete pumping station at foot of Beech Ave. John Galt, Engr., Toronto, Ont.

PORTAGE LA PRAIRIE, MAN.—Bids are asked by F. A. Whitaker, Secy. Treas., until April 12 for water-works and sewerage, the work consisting of pipe laying, power house, water tower, pumping machinery and boilers. Willis Chapman, Engr., Toronto, Ont. (Advertised, Engineering News.)

MONTREAL, QUE.—Bids are asked by Montreal Water & Power Co., 107 St. James St., Montreal, until May 15 for furnishing 15,000,000 gallon light duty pumping engine with boilers, etc., complete. (Advertised, Engineering News.)

## SEWERAGE.

***The names of parties awarded contracts are printed in capital letters.***

SALEM, MASS.—Bids are asked by the Sewerage Commissioners until March 31 for the construction of cast-iron force main and Section I, North River Trunk Sewer, consisting of about 9,900 ft. of 30-in. c. i. pipes laid under water, 500 ft. 60-in. brick and 1,550 ft. 60-in. cast-iron. Cast-iron pipe will be furnished by the city. Bids will also be received for constructing the masonry portions of Sections 4 and 5 of the North River Trunk Sewer with brick or reinforced concrete masonry. Approximate length of sewer is 4,810 ft. Joseph N. Peterson, Chn.; Ernest W. Bowditch, Engr. (Advertised, Engineering News.)

BUFFALO, N. Y.—We are informed by Charles M. Morse, Deputy Engr. Comr., Dept. Public Works, that bids were received on March 2 for construction of sewers as follows: Allegheny St. sewer, Dark & Co., lowest bidders, at $666; Julius St., Dark & Co., 654 Main St., lowest bidders, at $345; Eagle St., Geo. W. Moore, 177 Elk St., lowest bidder, at $2,100; Heacock Park and South Side Parkway sewer, Dark & Co., lowest bidders, at $655.

BUFFALO, N. Y.—Aldermanic Committee on Sewers are reported to have rejected all bids for construction of sewer along Virginia St. Sewer would cost about $68,500.

HOBOKEN, N. J.—Bids are asked until 8 p. m., March 22, for construction of sewerage. James H. Londrigan, Cy. Clk.

NEWARK, N. J.—Plans have been submitted to Board of Works by Engineer Edward S. Rankin for the proposed sewer system in the Parkview section and the Weequahic Park tract. Est. cost, $80,000.

PHILADELPHIA, PA.—Bids are asked until noon, March 10, for following sewerage construction: (a) Branch sewers; (b) repairs, reconstruction and improvement of old sewers, and construction of manholes and inlets; (c) reconstruction and relief of Cohocksink sewer; (d) construction of new inlets, manholes, laterals, et[illegible] for 1905; (e) reconstruction of inlets and appurtenant [illegible], manholes, etc., in the entire city during 1905; (f) [illegible] buildings; (g) rebuilding stack at Mingo creek pumping [illegible]; (h) tensile machine for cement testing laboratory; [illegible] Photo-lithographs and half-tones for annual re[illegible] of the Bureau of Surveys of the year 1904. Peter [illegible] Costello, Dir.

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PITTSBURG, PA.—THE NICHOLS-MAG[illegible] CONSTRUCTION CO., of Taunton, Mass., has b[illegible] awarded contract to build a new section of sewerage, a[illegible].

WILLIAMSPORT, PA.—Bids are asked [illegible] noon, March 15, for construction of a sewer in Locu[illegible] J. J. Galbraith, Cy. Clk.; James F. Fisher, Cy. En[illegible]

NORRISTOWN, PA.—S. C. Corson, Boro. En[illegible] informs us that bids were received for Penn St. san[illegible] sewer. Award of contract is before sewer committee, [illegible]h will take action March 21.

ALLEGHENY, PA.—It is reported that city [illegible] voted to issue bonds as follows: For improvement [illegible] streets and construction of sewers, $420,000; extension [illegible] water system, $225,000; regrading and repaving of [illegible]ts and for payment of damages occasioned by el[illegible]ion of tracks of Pennsylvania Co., $125,000; repairs a[illegible] improvements to city parks, $90,000; new engine ho[illegible] in 10th Ward, $25,000; and $25,000 for building porch[illegible] at Allegheny City Home. Edward J. McIlvain is [illegible] Pub. Works.

ALLENTOWN, PA.—Bids are asked until [illegible]ch 15, noon, for constructing a sewer. C. E. Harsh, [illegible]lk. Bd Public Service.

WASHINGTON, D. C.—Bids were received o[illegible] Feb. 20 for furnishing c. i. pipe specials for sipho[illegible] as follows, we are informed by A. M. E. Phillips, a[illegible]g Supt. of Sewers: U. S. Cast Iron Pipe & Foundry C[illegible], $2,[illegible]; Camden Iron Works, $3,196.

COVINGTON, KY.—New sewers and proposed sidewalk and street improvements will cost $1[illegible]. The Willow Run sewer is planned for this year.

ABERDEEN, MISS.—See under Water-Works.

SANDUSKY, O.—J. W. Miller, Cy. Engr., has plans for the construction of the Railroad St. sewer. It will cost $1,662; extending West Monroe St. sewer, $4,116.

AKRON, O.—J. W. Payne, Cy. Engr., estimates the cost of constructing a sewer in Wolf Ledge Run at $2[illegible],750, it is stated.

PORTSMOUTH, O.—Benj. Bratt, Cy. Engr., has completed plans for a flood defense sewer, which will cost $7,000, including pumping station. Bids for this work are asked until March 29 by Filmore Musser, Clk. Bd. Public Service.

CINCINNATI, O.—Bids are asked by Geo. F. Holmes until March 29 for the construction of sewers, etc., at an approximate cost of $10,000. Also for grading, curbing and paving with brick Oak Ave.

JACKSON, O.—Bonds for $60,000 for new sewers have been voted, it is reported.

URBANA, O.—E. G. Bradbury, Engr., of Columbus, has made a proposition to this city to construct a sewage disposal plant. It is estimated that the plan will cost from $6,000 to $20,000.

YOUNGSTOWN, O.—City has passed resolutions providing for several new sewers. F. M. Lillie is Cy. Engr.

INDIANAPOLIS, IND.—The Board of Public Works has decided to construct six miles of sewerage in the northwestern portion of this city, at an estimated cost of $50,000. Improvement will be made this year. B. G. T. Jeup is Cy. Engr.

LOGANSPORT, IND.—The Common Council has ordered the construction of a $50,000 sewer on the west side. Construction will be begun at once.

WABASH, IND.—Bids are asked until March 13, 6 p. m., for building sanitary sewer in Main St. Freemont McLees, Cy. Clk.

LANSING, MICH.—The following are reported to be the bids opened on Feb. 27 for constructing Weinman Creek Valley sewer, in Pine and other streets: I. H. Algate, Lansing, $17,934, and M. E. Fitzpatrick, Lansing, $19,500.

MONMOUTH, ILL.—PORTER & MERRIFIELD have been let the contract for Sixth St. sewer, at $1,950.

CHICAGO, ILL.—C. D. Hill, Engr., Bd. Local Improvements, writes us that the county court of Cook County, Ill., has confirmed the assessment for the 95th St. sewage pumping station and system of sewers to be erected in the southern part of Chicago. This improvement is similar to that of the Jackson Park Ave. pumping station and sewer system, which was described in Engineering News on March 31, 1904, with the exception that the sewers in the 95th St. sewer system will be built of concrete. There will be about 15 miles of concrete sewers, varying in size from 10½ ft. to 3 ft. in diameter. The pumping station will consist of three centrifugal pumps driven by compound Corliss engines. The estimated cost of the improvement is $745,000. The territory to be drained is about 5,500 acres. City probably will ask for bids within 60 days. A copy of the ordinance containing photographic copies of the drawings of this pumping station is on file at office of Engineering News, New York.

OSHKOSH, WIS.—Board of Public Works has presented plans to council for new sewers.

WATERTOWN, WIS.—Bids are asked by Board Public Works, E. B. Parsons, Cy. Engr., until March 18 for construction of 2,810 ft. 10-in. to 18-in. pipe sewers and 2[illegible] catchbasins.

CRESCO, IA.—Bids are asked until March 20, 8 p. m., for the construction of a sewer. To be of 8-in. vitrified sewer pipe, cemented joints; to have six manholes and one flush tank, and to be about 2,800 feet long. W. L. Richards, Chn. Sewerage Com.

DULUTH, MINN.—City Engineer McGilvray has completed plans for a sewer system on Duluth Heights. Estimated cost, $68,369. Other sewers under consideration.

FT. McINTOSH, TEX.—Bids are asked by Robt. R. Stevens, Q.-M., San Antonio, Tex., and at office of Quartermaster, Ft. McIntosh, until noon, March 29, for the construction of a sewerage system at Ft. McIntosh.

GALVESTON, TEX.—J. C. KELSO was awarded contract for Louisiana St. sewer, at $15,896.

ST. JOSEPH, MO.—It is reported that bids are to be advertised at once for construction of main sewers. $250,000 was voted last fall. As noted at that time, contracts for two large sewers were awarded—for the Blacksnake and Sycamore Sts. sewers. W. H. Floyd, Jr., is Cy. Engr.

SALT LAKE CITY, UTAH.—George W. Riter, Cy. Engr., informs us that city has sold $150,000 of sewer bonds, the proceeds of which are to be used in constructing an intercepting sewer three miles long; a pumping plant which will pump about 4,000,000 gallons of sewage daily, at a lift of 40 ft. into main gravity outlet sewer, will be installed.

SEATTLE, WASH.—Board of public works has awarded contracts for sewer work as follows: Tenth Ave. N. E., and other streets: T. RYAN, $8,893; North Broadway: KROGH & JASSEN, $2,399.

NORTH YAKIMA, WASH.—Bids are asked until March 20 for constructing about five miles of sewerage.

SANTA MONICA, CAL.—City Trustees have passed an ordinance providing for an issue of $20,000 of bonds to construct a septic tank and main sewer trunk line; also $7,000 for new fire equipment. Bids are asked for sewerage construction. Thomas H. James is Cy. Engr.

SAN FRANCISCO, CAL.—A sewer will be built in Buena Vista Ave.

SEATTLE, WASH.—A. C. GOERIG, Seattle, is stated to have been awarded contract for sewering Westlake Ave. for $26,537. Bids were received Feb. 25.

FRESNO, CAL.—We are informed that I. Tellman, Cy. Engr., has been instructed to prepare plans and specifications for two miles of intercepting sewers and a complete system of storm-water sewers, also for extension of outfall sewer. The work will cost about $125,000.

HAMILTON, ONT.—Sewers Committee asks for $11,356 for Ferguson Ave. sewage disposal works, $7,240 for Wentworth St. works, and $8,050 for general construction. T. Beasley is Cy. Clk.

PORTAGE LA PRAIRIE, MAN.—See under Water-Works.

SELKIRK, MAN.—Town is petitioning the legislature for authority to borrow $100,000 for sewer system and other work. J. K. McKenzie is Mayor.

BERLIN, ONT.—It is planned by town council to spend $6,000 on extension of the sewer system. Henry Aletter is Town Clk.

PETERBORO, ONT.—Plans for an outfall sewer to be built under an agreement with the municipality of Ashburnham have been prepared by Willis Chipman, C. E., of Toronto. The Board of Works has matter under consideration. Estimated cost is $10,000. S. R. Armstrong is Town Clk.

WINNIPEG, MAN.—Bids will be received for building sewers in a number of streets. Est. cost, $60,056. C. J. Brown is Cy. Clk.

WINNIPEG, MAN.—Bids are asked by Chairman Committee of Works until March 14 for supply of sewer pipe and junctions. C. J. Brown, Cy. Clk.

EDMONTON, N. W. T.—The city council will advertise for installing new trunk line sewers and water extensions J. G. Kinnaird is Mayor.

## GARBAGE DISPOSAL—STREET CLEANING

*The names of parties awarded contracts are printed in capital letters.*

DALTON, MASS.—Matter of new garbage system may be voted on at annual town meeting.

NEW YORK, N. Y.—Bids are asked by George Cromwell, President Richmond Borough, First National Bank Bldg., St. George, New Brighton, until March 14 for labor and materials for sprinkling each day 34.78 miles of highways.

PERTH AMBOY, N. J.—Bids are asked until March 20 for collection and disposal of garbage and ashes. W. H. Fullerton, Street Comr.

DUQUESNE, PA.—We are informed that there has been considerable talk of building a garbage furnace here.

DUBOIS, PA.—R. Dawson Hall, Boro. Engr., has prepared a report which is to be delivered before the Board of Trade on a garbage kiln for this place.

LEXINGTON, KY.—Following bids were received Feb. 21 by Mayor Combs for sweeping and cleaning brick streets for period from March 1 to Jan. 1. A. S. Farley, $9,107; J. H. Hostetter Transfer Company, $7,975 without sprinkling and $8,475 with sprinkling; John O'Neill and Frank Douglas, $9,985; J. F. Crowe, $5,868; The Home Construction Co., $8,750.

LOS ANGELES, CAL.—Bids are asked by H. J. Lelande, Cy. Clk., until March 13 for construction and installation of garbage crematory.

## STREETS AND ROADS.

*The names of parties awarded contracts are printed in capital letters.*

CONCORD, N. H.—A bill has been signed by Governor appropriating $125,000 annually for six years for improving highways of state.

FALL RIVER, MASS.—The Committee on Highways has voted to recommend that Frank A. Thurston, Supt. of Sts., be authorized to secure bids for contracts to furnish 17,000 ft. curbing, 220,000 granite paving blocks and 30 catch-basins. Philip D. Borden is Cy. Engr.

GENEVA, N. Y.—Bids were received Feb. 23 by Board Public Works, W. S. Wood, Secy., for paving East North St. and Castle St. with brick. McGREEVY CONSTRUCTION CO., Ithaca, N. Y., was low bidder on Metropolitan block at $51,138 for paving on concrete foundation and $51,710 for paving on concrete and Medina block foundation; John R. Baxter, Jr., Utica, N. Y., was low bidder on Mack block at $53,252 for paving on concrete foundation and $52,871 for paving on concrete and Medina block foundation; Thos. Fitzgerald, Jr., Fredonia, N. Y., was low bidder on Clearfield block at $52,313 for paving on concrete foundation and $52,161 for paving on concrete and Medina block foundation. It is likely that the abovementioned are the only three kinds of brick that the Board of Public Works will consider in awarding the contract.

TROY, N. Y.—The City Engineer has been instructed to prepare specifications for paving 15th St.

JERSEY CITY, N. J.—The Street and Water Board, Chas. Van Keuren, Ch. Engr., wants estimates for improvement of Myrtle Ave. Estimate of quantities: 1,287 cu. yds. earth excavation, 2,415 sq. yds. asphalt paving, 1,725 lin. ft. curbstone, 4,272 sq. ft. flagging, 3,268 ft. reset and dressed flagstone; also for improvement of Plainfield Ave., by grading, gutters paved with Belgian blocks and new bluestone flagging; also for improvement of Logan Ave, and in a like manner, except that Belgian block will be laid in the carriage way.

ALLEGHENY, PA.—See under Sewerage.

CLAIRTON, PA.—Bids are asked by A. M. Roberts, Boro. Clk., until March 20 for paving Third St. with brick and constructing drainage system; requiring approximately 5,700 cu. yds. excavation, 8,400 sq. yds. brick, 5,000 lin. ft. stone curbing, dressed, 700 lin. ft. stone curbing, rough, 300 lin. ft. 12 in. sewer connection, etc. C. D. Suppice, Engr., Boro. Bldg.

HARRISBURG, PA.—Bids are asked by State Highway Dept. until March 25 for constructing 5,280 ft. road in Earl Township; 2,640 ft. road in Rapho Township and 3,020 ft. of road in Penn Townships, all in Lancaster County.

PHILADELPHIA, PA.—Peter E. Costello, Dir. Dept. Pub. Wks., informs us that bids will be received until March 17 for paving and repaving 254 streets, covering a distance of about 26 miles in length. Est. cost, $1,000,000.

PHILADELPHIA, PA.—According to reports the grade crossings along main line of Philidelphia & Reading Ry. Co. within city limits, will soon be abolished. Est. cost $6,000,000. Wm. Hunter is Ch. Engr., City. Peter Costello is Dir. Pub. Wks.

WILKESBARRE, PA.—All bids received by Fred. H. Gates, Cy. Clk., Feb. 27 for paving streets were rejected. Bids will be readvertised for.

DUBOIS, PA.—We are informed that about 20,000 sq. yds. of paving will doubtless be laid by this borough this year. R. Dawson Hall is Boro. Engr.

WHEELING, W. VA.—Bids are asked by Board Public Works until March 15 for furnishing paving brick, sewer pipe, stone curbing and concrete curbing during year 1905, also for dressing and resetting old curb. Thos. McGranahan, Clk.

ATHENS, GA.—The work on the macadamizing of country roads in this county will be started as soon as weather permits.

AUGUSTA, GA.—Bids are asked by City Council until March 20 for setting all stone curbing which may be ordered by City Council during the year 1905. Nisbet Wingfield, Comr. Pub. Wks.

JACKSONVILLE, FLA.—Bids are asked by Board Public Works until March 20 for grading and laying about 43,730 sq. yds. gravel on portions of several streets and laying 36,120 lin. ft. wood curbing. Philip Prioleau, Cy. Engr.

MOBILE, ALA.—It is stated that about 1¼ miles of gravel road are to be laid by city and Mobile County jointly. J. H. Hazlehurst is Engr.

MONTGOMERY, ALA.—Bids are asked by R. S. Williams, Cy. Treas., until April 3 for paving sidewalks with Schillinger or hexagon blocks, according to specifications in City Engineer's office, on Virginia and Jefferson Davis Aves.

BIRMINGHAM, ALA.—Contract for paving on 21st St. bridge will soon be let. Julian Kendrich is Cy. Engr.

LOUISVILLE, KY.—Bids were opened Feb. 24 by Board Public Works for paving St. Xavier and Caldwell Sts. and Ormsby Ave. with brick. Est. cost, $15,000. L. R. FIGG secured contract for Caldwell St. and GEO. W. GOSNELL was awarded the contract for other two streets.

XENIA, O.—Bids will be advertised for this spring for construction of a seven-mile macadamized pike in this county. Address County Engineer.

XENIA, O.—Plans are being prepared by City Engineer for about 17,000 sq. yds. asphalt paving on Market St. Bids will probably be advertised for by Board Public Service in the spring.

EAST PALESTINE, O.—This village contemplates the paving of Main St. with brick, about 12,000 sq. yds.

CINCINNATI, O.—Bids are asked by County Commissioners until March 25, for improving Lees Creek Road in Harrison Township. Eugene L. Lewis, County Audr.

JERRY CITY, O.—Bids are asked by J. A. Dennis, Ck., Bloom Township, until March 23 for quarrying, crushing and delivering stone on portions of several roads, approximately 20,305 cu. yds.

LIMA, O.—Bids are asked by Directors Public Works until March 29 for furnishing all material and labor and constructing a sheet asphalt pavement on Elm St.: approximate quantities, 13,500 sq. yds. asphalt paving on a 6-in. concrete foundation, 5,800 lin. ft. combined cement curb and gutter, together with catch-basins, excavation, etc. R. H. Gamble, Ch. Engr.

CLEVELAND, O.—Contracts for paving streets this summer were awarded by Board Public Service Feb. 20 as follows: FRANK ORLIKOWSKI, 5 streets; ROEHL BROS., 16 streets; NORTHERN OHIO PAVING & CONSTRUCTION CO., 12 streets; JOHN F. BRENNAN, 6 streets; STANDARD PAVING CO., 8 streets; Cleveland Trinidad Paving Co., 38 streets. Wm. J. Carter is Cy. Engr.

CLEVELAND, O.—It is statd that bids will be received by County Commissioners until March 22 for grading and draining Pettibone Road. Julius S. Dorn, Clk.

WELLESVILLE, O.—Board Public Service is considering plans for the improvement of several streets.

CINCINNATI, O.—Bids are asked by Board Public Service, Geo. F. Holmes, Clk., until March 29 for grading, curbing and paving with brick Oak St.

NORWOOD (STA., CINCINNATI), O.—Bids are asked by E. B. Edwards, Clk. Bd. Pub. Serv., until April 1, for the improvement of Lloyd Ave. by macadamizing constructing culverts and drains, according to plans of J. A. Stewart, Cy. Engr., 813 Traction Bldg., Cincinnati.

PORT CLINTON, O.—Plans have been ordered prepared for paving of Madison St.

MASSILLON, O.—Plans and specifications have been prepared for paving covering nearly two miles of city streets. Cost, $49,000.

BLOOMDALE, O.—The Township Trustees have decided to construct 6½ miles of stone roads this summer.

CINCINNATI, O.—It is stated that bids will be received by Board Public Service until March 27 for the repair of about 40 streets with asphalt.

CINCINNATI, O.—Board Public Service awarded the contract for paving Clark St. to BARBER ASPHALT PAVING CO., for $15,765.

FORT WAYNE, IND.—F. M. Randall, Cy. Engr., informs us that bids will be received by Board Public Works until March 23 for about 63,000 sq. yds. of brick and asphalt paving. Est. cost, $135,000.

MICHIGAN CITY, IND.—City Council has passd resolutions providing for the paving of several streets about 33,700 yds. with brick, using cement curb. Harry M. Miles is Cy. Engr.

INDIANAPOLIS, IND.—Bids are asked by Board Public Works, 5 Court House, until March 13 for improving sundry streets and sidewalks.

TERRE HAUTE, IND.—Bids are asked by Board Local Improvements until March 15 for paving East Main St. N. S. Kidder, Cy. Engr.

BEDFORD, IND.—It is stated that bids will be received by Lawrence County Commissioners until March 13 for construction of gravel or macadamized roads in Marshall Township. Anselm Wood, Chn.

BROOKVILLE, IND.—It is stated that bids are asked until March 20 for grading and graveling 11th and Franklin Sts. Karl L. Hanson, C. E., Connersville, Ind., is Engr. Jos. Dacey, Cy. Clk.

PARKRIDGE, ILL.—Contracts for cement sidewalks and street crossings will be let by this village about May 1.

DESPLAINES, ILL.—This village will soon let contract for eight miles of cement sidewalk.

WATERTOWN, WIS.—It is stated that bids are asked until March 11 for improving several streets. Frank S. Weber, Cy. Clk.

RACINE, WIS.—We are informed that bids were received March 4 by Board Public Works for paving Douglas Ave., with brick on macadam foundation, the three lowest bidders being as follows: John A. Jones, Racine, Wis., $27,450; R. R. Birdsall, Racine, Wis., $29,759; Jas. Cape & Sons, Racine, Wis., $30,227. Action on awarding contract was deferred until March 11. P. H. Connolly, Cy. Engr.

SHENANDOAH, IA.—Ordinance has been passed by Council providing for paving on East Railroad, Maple, Elm, Blossom Sts. and Clarinda Ave. with vitrified brick.

DES MOINES, IA.—A. C. Frisk, Ch. Clk. Bd. Pub. Wks., writes us that contract for 3,954 sq. yds. brick paving on 2d St. has been let to O. P. HERRICK, 126 W Locust St., Des Moines, for $6,208.

DES MOINES, IA.—Bids are asked by Board Public Works until March 14 for constructing brick and cement sidewalks for fiscal year 1905. W. W. Wise, Chn.; John W. Budd, Cy. Engr.

DAVENPORT, IA.—Contract for paving six streets with brick has been let to McCARTHY IMPROVEMENT CO., 116½ W. 3d St., Davenport, at a total of $42,850. Contract for paving four streets with asphalt was let to same concern at a total of $45,152. Bids were received Feb. 14 by Board Public Works, Thomas Murray, Cy. Engr.

TACOMA, WASH.—It is stated that bids are asked by Wm. Welsh, Comr. Pub. Wks., until April 1 for concrete and asphalt paving on North G St.; cost, $80,000. Also for concrete and asphalt paving on North K St.; cost, $44,000. Plans and specifications may be seen at office of Frank L. Davis, Cy. Engr.

Bids will also be received until March 15 for concrete and asphalt paving on North C St. Cost, $117,000.

HELENA, MONT.—Bids are asked by City Council until March 20 for paving Main St.: Bids are to be received on the following approximate quantities: Brick and asphalt—14,200 yds. old block removed, 1,445 sq. yds. paving gutters, 520 sq. yds. brick pavement between tracks, 12,235 sq. yds. asphalt pavement, 1,987 cu. yds. concrete, etc.; bids on bitulithic and brick—13,680 sq. bitulithic, 520 sq. yds. brick, 30 cu. yds. sand for brick pavement, 1,987 cu. yds. concrete, 14,200 sq. yds. old block removed, etc.; on all brick, 14,200 sq. yds. brick pavement, 1,987 cu. yds. excavation, 1,987 cu. yds. concrete, etc. Martin Doty, Cy. Clk.

INDEPENDENCE, MO.—Bids are asked until March 22 for paving East Pacific St. with vitrified brick; approximate quantities, 2,000 sq. yds. H. H. Pendleton, Cy Engr.

JOPLIN, MO.—It is stated that A. F. FRANKS, of Jacksonville, Ill., received the contract for paving Allen St., at $16,000; Church St., for $6,250, and Daugherty, Webb and Main Sts., at $7,500 each.

TORONTO, ONT.—Notice has been given of the intention of council to construct an asphalt pavement on University Ave., at a cost of $21,998.

WINNIPEG, MAN.—The following street work is to be undertaken by the city: Burrows Ave., asphalt paving, $26,350; Maryland St., asphalt, $5,375; Corydon Ave., sewer, $39,000. H. N. Ruttan is Cy. Engr.

WINNIPEG, MAN.—This city will shortly advertise for tenders for granolithic walk on Main St.; est. cost, $3,500. C. J. Brown, Cy. Clk.

BRANTFORD, ONT.—Bids are asked by R. W. Robinson, Chn. Bd. of Wks., until March 16 for supply of paving brick, sewer pipe and lumber required by city of Brantford for 1905. T. Harry Jones, Cy. Engr.

## MANUFACTURING PLANTS.

*The names of parties awarded contracts are printed in capital letters.*

PORTSMOUTH, N. H.—A boiler shop is to be erected in navy yard at a cost of $140,000.

WORCESTER, MASS.—The contract for erecting building for Hovey Laundry Co. was awarded to JAMES MILES & SON. Cost, $6,000.

CHERRY VALLEY, MASS.—Cutting, Carleton & Cutting, Archs., 44 Front St., Worcester, have plans for an addition to factory to Channing Smith, at Cherry Valley.

GREENFIELD, MASS.—Plans have been prepared by Jas H. Clough, Arch., Holyoke, Mass., and figures have been taken for 2½-story tempering and japanning building for Goodell & Pratt, Greenfield.

LYNN, MASS.—Thos. A. Kelley & Co. are considering a large addition to their kid leather factory, including a new power plant. Thos. A. Kelley is Mgr.

JEWETT CITY, CONN.—The plant of Jewett City Textile Novelty Co. was destroyed by fire with a loss of $80,000.

NEW BRITAIN, CONN.—The Stanley Works will erect a one-story blacksmith shop, 30 x 122 ft.

BRIDGEPORT, CONN.—Henry A. Lambert, Arch., Warner Bldg., has prepared plans for a dye house, to be erected on Middle St., for Read Carpet Co.

WATERBURY, CONN.—Contract for a four-story addition to plant of Scoville Mfg. Co. has been awarded to GEO. S. CHATFIELD CO.

BRIDGEPORT, CONN.—TRACY BROS. CO., Waterbury, were awarded the entire contract for new buildings of Union Metallic Cartridge Co., Bridgeport. Saml. L. Green is Arch., Holyoke, Mass.

NEW YORK, N. Y.—Rich. R. Davis, Arch., 247 West 125th St., has plans for a brick factory and stable for F. W. Dressel, 3876 Park Ave. Cost, $4,000.

ROCHESTER, N. Y.—Pritchard-Strong Co., 179 Main St., W., plan to build a lantern factory. Cost, $40,000.

ROCHESTER, N. Y.—Jos. Oberlies, Arch., Granite Bldg., has plans for four-story vehicle and harness factory for W. H. Bowerdink, at 73 North St.

SENECA, N. Y.—The Seneca Button Co. was incorporated with $150,000 cap. stock. Incorporators: Thos. D. Holland and Fletcher Swain, of New York, and D. E. Ball, of Rutherford Park, N. J.

BATAVIA, N. Y.—Bids are asked until April 1 for erecting a three-story factory building for K. B. Mathes. Cost, $8,000. H. W. Homelius, Arch., City.

GLENDALE (L. I.), N. Y.—The Evans Automatic Sash Holder Mfg. Co. has been incorporated with $10,000 cap. stock. Incorporators: Henry Doht, of Glendale; W. F. Evans and J. H. DeBrogga, of Evergreen, N. Y.

NEW YORK, N. Y.—The Jamaica Brewing Co. has been incorporated with a capital of $500,000. Peter Holler and Julian T. W. Kasterdieck, Brooklyn, and Jacob Miller, of New York, are the incorporators.

PENFIELD, N. Y.—The L. H. Gardner Paper Co. was incorporated, with a capital of $25,000. The incorporators are: L. H. Gardner, J. B. Walker, Rochester, N. Y., and C. E. Chuster, Penfield.

PERTH AMBOY, N. J.—It is stated that arrangements have been made by Chas. M. Schwab, the steel magnate, to erect a large steel plant at this place. An immense tract of land has already been purchased and plans and specifications will soon be completed.

PATERSON, N. J.—According to reports the Watson Car Works, of Springfield, Mass., intend establishing a factory for the manufacture of cable and street cars at Lakeview.

PHILADELPHIA, PA.—Chas. Kranich, 100 East Bringhurst St., wants bids for an addition to its bakery.

PHILADELPHIA, PA.—Sub-bids are desired by Roydhouse, Arey & Co., Fidelity Bldg., for an addition to factory, at Allegheny Ave. and Mascher St., for J. R. Keim & Co. Brick, 4 stories, 50 × 100 ft.

SCRANTON, PA.—It is stated that the Scranton Garage & Motor Car Co. has invited bids for two-story brick repair shop and warehouse.

ERIE, PA.—The Erie Brewing Co. will expend about $100,000 this spring on additions and alterations to its plants.

ROYERSFORD, PA.—The general contract for foundry for Floyd-Wells Co. has been awarded to JACOB MOWRY, City. J. V. Poley, C. E., is Arch., Royersford.

PHILADELPHIA, PA.—HARRY BROCKLEHURST, 514 Norris St., has coutracts for an extension, 57 × 75 ft., to machine shop of Midvale Steel Co., to cost $12,000; for one-story addition, 16 × 46 ft., to storehouse of Thos. Potter Sons & Co., Second St. and Erie Ave., and for a one-story brick building, 24 × 60 ft., at plant of Blabon Co., Nicetown.

DEMMLER (P. O. McKEESPORT), PA.—THE CHARLES G. SMITH CO., of Pittsburg, has secured contract for entire machine tool equipment for large addition that is being erected to plant of the Firth-Sterling Steel Co., Demmler, Pa.

PITTSBURG, PA.—The Fawcus Machine Co., City, will double the capacity of its plant by the addition of a second floor to its present shop.

McKEESPORT, PA.—According to press reports the United States Steel Corporation will spend between $10,000,000 and $12,000,000 this year for improvements to plant of National Tube Works Co. at McKeesport. One new furnace will be built and the two old ones will be reconstructed. The entire rolling mill plant and tube department will be rebuilt and capacity of plant almost doubled.

WILMINGTON, DEL.—The Harlan & Hollingsworth Co. writes us that the contract for their new car shops has not yet been awarded. Hill & Thompson, Archs. Previously mentioned.

BALTIMORE, MD.—The Lester Adams Tobacco Press Co. has been incorporated with $100,000 cap. stock to manufacture tobacco machinery. Incorporators: Wm. B. Tunstall, 207 West Lombard St.; Frank L. Le Compte and J. Oliver Caulk.

ALBERMARLE, N. C.—J. W. Cannon and associates will establish a cotton mill here, containing 20,000 spindles.

THOMASVILLE, N. C.—Thomasville Chair Co., recently incorporated to establish chair factory, will erect buildings 40 × 130 and 40 × 75 ft., and the plant will have a daily output of 600 chairs. About $20,000 will be invested.

SPARTANBURG, S. C.—Ladshaw & Ladshaw, Engrs., City, writes us work has not yet been started on plants of Spencer Mountain Mills, Lowell, N. C., and Chatham Mfg. Co., Elkin, N. C., and shall not be ready to consider machinery matters for several months.

GEORGETOWN, S. C.—Jos. Schenk and associates are forming company for manufacture of ash oars.

WELLFORD, S. C.—J. J. Vernon contemplates the erection of a grist mill on North Tiger River.

SUMTER, S. C.—The Sumter Steam Laundry, recently organized, will erect building, 25 × 75 ft.

CHARLESTON, S. C.—Th Southern Pickle Co. has been incorporated with $10,000 cap. stock, and will establish a plant here.

DALTON, GA.—Barrett, Denton & Lynn will erect a new flouring mill at a cost of $25,000. Plans are being prepared for a five-story building.

AUGUSTA, GA.—B. Lawrence and others will erect a $10,000 soap factory here.

DALTON, GA.—The Duane Chair Co. will double the capacity of its plant at this place.

GRANTVILLE, GA.—The Grantville Hosiery Mills will increase its capital by $115,000 for the purpose of building yarn mill and adding 25 knitting machines. Contracts for machinery will be awarded at once.

COLUMBUS, GA.—The Buhler Distilling Co. will be incorporated by Mauritz Buhler and associates, and will establish plant for rectifying and compounding whiskey.

CLARKSVILLE, GA.—J. E. Fenner, of Rochdale, Mass., will locate a knitting mill, saw and planing mill and other industries near Clarksville. Mr. Fenner can be addressed in care of J. H. Hicks, Clarksville.

JACKSONVILLE, FLA.—The Standard Paper & Supply Co. is being-organized with $50,000 cap. stock. Samuel P. Holmes is Pres. It is stated that the company will erect paper mill.

GAINESVILLE, FLA.—The Standard Fertilizer Co. has been incorporated with $75,000 cap. stock to establish a fertilizer factory. L. R. Wood is Pres.

CENTER, ALA.—It is stated that bids will be received by Tatum & Smith until April 1 for constructing a cotton gin, according to plans of Continental Gin Co., of Birmingham. Cost, $4,000.

BIRMINGHAM, ALA.—The Birmingham Stove & Foundry Co., capital $25,000, has been chartered by H. F. Maus, J. M. Jolley, J. B. Gibson and others, to erect a stove plant.

NEW ALBANY, MISS.—A canning factory will be established here. Secretary of Business League can give information.

NEW ORLEANS, LA.—The Weckerling Brewery, owned by New Orleans Brewing Association, was damaged by fire. Loss, $200,000.

NEW IBERIA, LA.—O. J. Trainor's Son will rebuild at once plant for manufacture of sash, doors, blinds, ceiling, flooring and other similar products, recently reported burned.

HALL CITY (P. O. MERRYVILLE), LA.—Chicago-Texas Land & Lumber Co., office 399 Quincy Bldg., 113 Adams St., Chicago, Ill., will erect double band-saw mill for development of its timber land in Calcasieu parish; daily capacity 800,000 ft. This company was reported as having surveys made for the location of town site, erection of mill and construction of tramroad through 17,000 acres owned by company; 8,000 more acres will be purchased.

CHATTANOOGA, TENN.—C. E. Buek has organized the Chattanooga Blast Furnace Co., which has taken possession of plant of former Chattanooga Furnace Co. The new company was organized with a capital of $225,000. The plant will be rebuilt at a cost of $100,000 and over. Plans for the rebuilding of the stack and other work are now being drawn and will be submitted to directors. Incorporators: C. E. Buek, H. Bond, G. N. Henson, S. M. Chambliss and John Dowling. Mr. Dowling will supervise the construction.

HUMBOLDT, TENN.—The Humboldt Mill & Elevator Co., recently incorporated with $20,000 cap. stock, will erect mill with a daily capacity of 150 barrels of flour and 1,200 bushels cornmeal and 40,000 bushel elevator. V. F. Jackey is Engr., and J. R. Evans, Arch.

CLAY CITY, KY.—The Clay City Brick Works, capital $75,000, has been chartered to build a plant with a capacity of 40,000 bricks per day.

OWENTON, KY.—M. Duke & Sons will increase the capacity of its flour mill.

ASHLAND, KY.—The Ashland Iron & Mining Co. will build a blast furnace. E. B. Hull is Supt.

YOUNGSTOWN, O.—Official announcements are made of the following improvements to local iron and steel works: Republic Iron & Steel Co., blast furnace, Chas. Hart, Dist. Mgr., Ralph Prahl and Harry Bixles, Engrs., City; Youngstown Iron Sheet & Tube Co., steel producing department, undecided yet, whether Bessemer or open hearth process, J. A. Campbell, Gen. Mgr., E. G. Murray, Pur. Agt.; Ohio Steel Works and furnaces of Carnegie Steel Co., present output of pig iron billets and rails to be enlarged, plans incomplete, H. A. Fennerty, Pittsburg, Pa., Pur. Agt.

PORTSMOUTH, O.—MACKINTOSH, HEMPHILL & CO., of Pittsburg, Pa., has been awarded contract for construction of a 30 × 84-in. plate mill, together with a 44 × 60 Corliss engine to operate the same, by Portsmouth Steel Co., Portsmouth, The mill is designed especiall for rolling light plates and the housings will be of steel castings.

AKRON, O.—B. F. Goodrich Co. will shortly erect a large plant near their present factory for manufacture of boots and shoes. Bertram G. Work is Gen. Mgr.

HAMMOND, IND.—W. B. Conkey Co. will erect a large brick addition to their printing plant this spring.

SOUTH BEND, IND.—The Anchor Fence Co. will build a frame factory building, 128 × 68 ft.

DETROIT, MICH.—The Michigan Wire Cloth Co., Hugh O'Connor, Secy., 500 Howard St., will enlarge its manufacturing plant by an additional brick building, 150 × 200 ft.

Bids will be received by D. W. Simons, 604 Wayne County Savings Bank Bldg., until March 10 for a two-story factory building, 40 × 120 ft. Cost, $5,000.

A site has been purchased here, 200 × 300 ft., upon which to build a large plant for the manufacture of rubber goods. Chas. H. Dale, Gen. Mgr., care of Samuel L. Smith, 718 Hammond Bldg.

A lot has been purchased here upon which Emil Tisch, of Grand Rapids, Mich., will build a plant for manufacture of cigar boxes, to have 20,000 ft. of floor space. Gerard-Stormfeltz-Lovely Co., Newbury Bldg., Detroit, are agents.

THE NORTHERN ENGINEERING WORKS, of Detroit, have been awarded a contract for electric traveling cranes required in new plant of Detroit Steel Casting Co. There will be one 30-ton, 4-motor crane, and two 10-ton, 3-motor cranes, all 70-ft. span. They have also secured the contract for one 3-motor, 5-ton special electric traveling crane from the Michigan Malleable Iron Co.

BEVERLY, MICH.—The contract for Acme Cement Plaster Co.'s plant has been awarded to CHAS. HOERTZ & SON, 18 Parker Bldg., Grand Rapids, Mich. The plant will consist of a warehouse, mill building and power houshe, to be built at Beverly, one-half mile from Grand Rapids. Cost, $20,000.

BAY CITY, MICH.—The Bay City Knitting Co. has been reorganized under name of World's Star Knitting Co. with an increase of capitalization to $200,000 of which $150,000 is paid in. The company will erect a large addition to its works and work will begin as soon as weather permits. In rear of present plant the company will also erect an electrical power house 52 × 30 ft. H. B. Smith is Pres.

EAST ST. LOUIS, ILL.—We are informed that the National Oil Refining Co., Cleveland, O., will erect a building and tanks at Eighth and Bond Ave., East St. Louis. The tanks will have a capacity of 2,000,000 gallons. J. Littlefield is the company's representative here.

WEST CHICAGO, ILL.—The Turner Cabinet Co. contemplates the erection of a two-story factory building this summer.

MILWAUKEE, WIS.—Chas. Fitzgerald, 106 Mason St., will soon award contract for trunk factory for Abel & Bach Trunk Co. Cost, $75,000. Excavations have begun.

CHIPPEWA FALLS, WIS.—Bids are asked by Sisters of St. Joseph's Hospital until March 15, 4 p. m., for construction of a brick laundry building. Plans, etc., with Sisters.

HORICON, WIS.—The factory of Willard Van Brunt & Co. was destroyed by fire. Loss, $20,000.

DAVENPORT, IA.—The Davenport Locomotive Co. has purchased a tract of land adjoining its present plant and announces that it will build a large factory building next fall.

PINE BLUFF, ARK.—A $200,000 wagon factory will probably be located here. D. C. Bell, Secy., Pine Bluff Trust Co., can give information.

WHITE, ARK.—The Gulledge Bros. Lumber Co., recently incorporated with $100,000 cap. stock, will erect saw mill, 30 × 100 ft., and equip for a daily capacity of 30,000 ft.

LACONIA, ARK.—The Thornton, Smith & Co. has been incorporated for the purpose of erecting a saw mill with a daily capacity of 30,000 ft., cotton gin and storehouse; about $20,000 will be invested. J. B. Thornton is Pres.

CROCKETT, TEX.—A cigar factory will be established here at a cost of $10,000. The directors are: D. A. Nunn, J. A. Blohm, W. A. Norris and others.

*Information concerning contracts to be let or supplies to be furnished, and corrections of errors and omissions in published items, are invited. Full details regarding the equipment, tools, etc., required for the proposed improvements are specially desired.*

WAXAHACHIE, TEX.—The Planters' Oil & Mill Co. will establish a cotton gin. The building will be con[illegible]d of brick and the plant will be equipped with the [illegible] machinery. It will be a square bale system and a [illegible] of six or eight gin stands will be installed. Wo[illegible] the plant will begin about May 1.

BALLINGER, TEX.—The Ballinger Light & Ice [illegible] contemplates erecting cotton gins.

BELTON, TEX.—J. R. Donnell contemplates [illegible]lishing a creamery here.

EAGLE PASS, TEX.—The Eagle Pass Tra[illegible] Co., Louis Le Tulle, Mgr., will erect a feed mill here.

MESQUITE, TEX.—R. S. Kimbrough, Alva [illegible]ers and others propose organizing a stock company [illegible] the erection of a cotton mill.

TERRELL, TEX.—Texas Midland Railroad Co. [illegible] let contract to D. C. McCORD, of Dallas, Tex., for [illegible] erection of its proposed shops; buildings to include [illegible]op 50 × 75 ft. machine shop 60 × 125 ft., paint shop [illegible] 150 ft., all one story; contract price $24,990.

DAWSON, TEX.—Dawson Cotton Oil Co. has be[illegible]orporated with $30,000 cap. stock, by L. E. McCo[illegible] P. N. Drane, J. B. Germany, M. L. Berry and other[illegible] construct and operate cottonseed-oil mills.

SONORA, TEX.—Hurst Bros. will erect an ice [illegible]ory here.

FORT WORTH, TEX.—The Cummer Folding Box [illegible], of Cadillac, Mich., will probably locate a box factory [illegible]re.

TULSA, IND. T.—A glass factory will be erected [illegible]ere. Address the Mayor for information.

ARDMORE, IND. T.—A. H. Palmer, W. S. Wo[illegible]ton, Walter Colbert and others will establish a canning factory here.

BOSWELL, IND. T.—A cotton gin will be erected here by W. L. Harris and J. M. Stone, of Durant.

HELENA, OKLA.—The Helena Milling & Elevator Co. has been chartered with a capital of $30,000. Incorporators: Wm. A. Berrian, of Camp Point, Ill.; Chas. H. [illegible]rth, of Quincy, Ill., and J. R. Harris and P. V. Imme[illegible], of Helena.

ROCHE HARBOR, WASH.—The Roche Harbor Lime Co., J. H. McMillan, owner, will construct a cement plant here with a daily capacity of 2,400 barrels.

CHEHALIS, WASH.—The American Flax Fibre Co., of San Francisco, Cal., has completed its plans for plant at Chehalis. Four buildings will be erected this spring. Theodore Poindexter, of San Francisco, is Pres.

SAN FRANCISCO, CAL.—H. B. Reticker, of San Luis Obispo, Cal., has contracted with the York (Pa.) Mfg. Co., represented on the coast by Henry Blethen, 503 Rialto Bldg., City, for a 10-ton ice plant. There is also to be a cold storage plant in connection with ice plant.

SAN FRANCISCO, CAL.—The Jackson Brewing Co., City, has called for bids through August Maritzen, 339 Market St., City, for a large brewery, to be erected at 11th and Folsom Sts. A 75-ton refrigerating plant, with ammonia compressor, is included in equipment called for. W. A. Fredericks is Pres., 1428 Mission St.

ORWELL, ONT.—A. White & Sons will rebuild their five-story cereal and chopping mill, 30 × 72 ft., which was recently destroyed by fire, causing a loss of $8,000. They will construct the building of cement or cement brick.

HAMILTON, ONT.—It is said that the Vulcan Soot Cleaner Co., of Dubois, Pa., has decided to build a large factory in this city.

MONTREAL, QUE.—W. E. Doran, Arch., has prepared plans for the extension of Lovell & Christmas Co.'s cold storage plant on King St.

WINNIPEG, MAN.—S. F. Evans, Arch., Pacific Ave., has plans for a biscuit and candy factory for Foley, Locke & Larson. Brick, 5 stories, 116 × 100 ft. Cost, $200,000. It is expected that plans will be completed this month and tenders for construction will be called.

## MISCELLANEOUS CONTRACTS.

*The names of parties awarded contracts are printed in capital letters.*

FIRE ENGINES.—Vancouver, B. C.—City Council will receive tenders until March 14 for supply of three fire engines.

DITCH.—Logansport, Ind.—Contract for digging Kern-Neff ditch in Bethlehem Township has been let to HARDING & GREEN, Peru, Ind., for $15,540.

REBUILDING DOCK.—Kingston, N. Y.—Contract for rebuilding dock of Central-Hudson Steamboat Co. at this place, has been let to ALEXANDER STURGEON.

PORTLAND CEMENT.—Portage La Prairie, Man.—Bids are asked by F. A. Whitaker, Secy.-Treas., until March 17 for 3,000 bbls. more or less, of Portland cement.

LUMBER—New York, N. Y.—Bids are asked by Commissioner of Street Cleaning, 13 Park Row, until March 15 for furnishing and delivering lumber.

TOP SOIL—New York, N. Y.—Bids are asked by Park Board, John J. Pallas, Pres., Arsenal Bldg., until March 16 for furnishing and delivering 10,070 cu. yds. top soil.

DRAINAGE DITCH—Anderson, Ind.—Contract for constructing five miles of open ditch and two miles of tile drain has been let to M. H. DOWNEY, Anderson, for $12,959.

PORTLAND CEMENT—New York, N. Y.—Martin W. Littleton, Pres., Borough of Brooklyn, is asking bids until March 15 for furnishing and delivering 2,000 bbls. Portland cement.

UNDERGROUND WIRES.—Glens Falls, N. Y.—We are informed that village contemplates placing underground all wires in the business portion. Geo. P. Slade, is Village Engr.

PORTLAND CEMENT.—Washington, D. C.—Bids are asked by Isthmian Canal Commission until April 13 for furnishing 10,000 bbls. Portland cament. (Advertised, Engineering News.)

DREDGING.—New Orleans, La.—Bids are asked by Sewerage and Water Board, Geo. G. Earl, Gen. Supt., F. S. Shields, Secy., until April 25 for dredging 55,000 cu. yds., by floating dredge for London Ave. outfall sewer.

COAL CONVEYING APPARATUS.—West Point, N. Y.—Bids are asked by the Quartermaster, West Point, until March 30 for furnishing and installing coal conveying apparatus at West Point. (Advertised, Engineering News.)

TILE DRAINS, ETC.—Waterman, Ill.—Bids are asked by W. E. Dean, Clk., Union Drainage District No. 1 until March 18 for constructing open ditches and tile drains, the latter requiring about 16,912 ft. of 6-in. to 24-in. tile.

PIER.—New York, N. Y.—Contract for extending and repairing pier at foot of East 35th St. (bids opened by Department of Docks, Feb. 21), has been let to NEW YORK STATE CONSTRUCTION CO., 78 Broad St., New York, for $18,964.

ELECTRIC ELEVATOR.—Waco, Tex.—Bids are asked by James Knox Taylor, Supervising Architect, Washington, D. C., until March 25 for installation of an electric passenger elevator in the U. S. court house and post office, Waco, Tex.

CANAL.—Duluth, Minn.—Great Northern Power Co. has awarded contract for construction of its canal, from Thomson to top of hill to PORTER BROS., Manhattan Bldg., Duluth, Minn., for about $300,000. Work on canal will be started March 1.

BROKEN STONE SCREENINGS, ETC.—New York, N. Y.—Bids are asked by George Cromwell, Pres., Richmond Borough, First National Bank Bldg., St. George, New Brighton, until March 14 for furnishing and delivering broken stone and screenings.

COAL PLANT.—New Orleans, La.—Bids are asked by Bureau Yards and Docks, M. T. Endicott, Ch., Washington, D. C., until April 29, for constructing plant for handling and storing coal at Naval Station, New Orleans. Appropriation of $148,000 is available.

SUBMARINE CABLE.—Washington, D. C. — Bids are asked by War Department, Signal Office, until March 15 for furnishing the signal corps with 150 miles deep sea type of submarine cable and 50 miles of intermediate type. Brig.-Gen. A. W. Greeley, Ch. Signal Office, U. S. A.

PUBLIC DOCK—Burlington, Vt.—We are informed that surveys and soundings have been made for public dock for this city, and plans and specifications are being prepared. No date has been set for receiving bids. F. O. Sinclair is Cy. Engr.

ELECTRIC CRANE.—Puget Sound, Wash.—Bids are asked by Bureau Yards and Docks, M. T. Endicott, Ch., Washington, D. C., until April 15 for furnishing 5-ton electric traveling crane for Navy Yard, Puget Sound. Specifications may be seen at office of Engineering News, 225 Broadway, New York.

NAVAL SUPPLIES.—Washington, D. C.—Bids are asked by Bureau Supplies and Accounts, Navy Department, until March 21, for furnishing at various navy yards, etc., a quantity of naval supplies, among which are electric cable, piles, blowers, wrenches, Portland cement, etc. H. T. B. Harris, Paym.-Gen., U. S. N.

ELECTRIC CRANES.—Portsmouth, N. H.—Bids are asked by Bureau Yards and Docks, M. T. Endicott, Ch., Washington, D. C., until April 1 for furnishing in place three electric traveling cranes at Navy Yard Portsmouth. Specifications for above work are on file at office of Engineering News, 220 Broadway, New York.

PUBLIC DOCK.—Edgewater, N. J.—We are informed that Borough of Edgewater will call for bids in about five weeks for construction of a public dock, to cost about $15,000. The dock is to be constructed opposite 130th St., New York City, and it is proposed to extend it from shore far enough to get a depth of 15 ft. of water.

REMOVING STONE—New York, N. Y.—Bids are asked for the removal of 80,000 cu. yds. of rock from protected harbor, each piece weighing about 100 lbs., covering a surface of about 350 sq. ft. Top of rock visible at low tide. Apply to P. D. Dumont, 16-22 William St., Room 101, New York; or P. O. Box "B," Pensacola, Fla. (Advertised, Engineering News.)

CHANNEL WORK.—New Orleans, La.—It is stated that Capt. J. F. McIndoe, U. S. Engrs., has recommended that all bids received Feb. 18 for constructing Sabine Lake channel be rejected, and that the work be readvertised. The estimated cost of the channel has been set at $536,500, and the lowest bid received is said to have amounted to $815,000 for the work.

DRAINAGE.—Grant Park, Ill.—Bids are asked at office of F. C. Teverbaugh, Town Clk., Yellowhead, Grant Park, until March 28 for construction of ditch for drainage of Yellowhead and Washington Drainage District No. 2. Ditch will be about 4½ miles long and will require excavation of about 80,383 cu. yds. Fred. Erichson, Drainage Comr. (Advertised, Engineering News.)

MACHINE TOOLS—Baltimore, Md.—Bids are asked by Board of Awards, E. Clay Timanus, Pres., until March 15 for furnishing and delivering complete one 16-in. belt driven lathe, one 18-in. belt driven lathe, one 22-in., two 24-in. and two 30-in. motor driven lathes. Also, one motor driven vertical drilling machine according to specifications which may be obtained at the office of Alfred M. Quick, Water Engr., City Hall, Baltimore, Md.

CONCENTRATOR.—Silver-Plume, Colo.—The Dives-Pelican & Seven-Thirty Mining Co., O. O. McReynolds, Consult. Engr., is erecting concentrating plant at this place. A plant is being built which is to have an ultimate capacity of 300 tons per day of 24 hours. The present installation includes crushers having combined capacity of 300 tons of ore, crushed to pass a 1½-in. ring in ten hours. A 250-HP. water tube boiler of the Babcock-Wilcox type, and a Rand cross compound Corliss valve, air compressor of a capacity of 1,700 cu. ft. free air per minute.

CANAL.—San Francisco, Cal.—The Point Richmond Canal & Irrigation Co., in which Paul Reichert, R. 202 Mutual Savings Bank Bldg., San Francisco, is interested, has completed plans for the excavation of a canal 150 ft. wide and 20 ft. deep, extending from the present water front for a distance of 2½ miles through the tide lands on the south side of Point Richmond, Contra Costa County. It will take about one year to complete the work. The company's plans include the operation of a large wheel dredge constructed by the Western Dredging Co., Oakland, Cal. The dredge is 154 ft. long, equipped with a wheel 54 ft. in diameter, carrying eight buckets and having a capacity of 20,000 cu. yds. per day.

SEA WALL AND SLIP; SINKING CAISSON.—New York, N. Y.—THE FOUNDATION CO., 35 Nassau St., New York, has been awarded contract for construction of sea wall and slip of New Orleans Terminal Co., at Chalmette, La., work being part of a general contract for the entire terminal system obtained by James Stewart & Co. The foundations of the sea wall are to be laid in a depth of about 40 ft. of water, resting on piles. The height of the wall, which consists of concrete, is 55 ft., and is designed so that ocean steamships of great draft can come alongside, as a depth of 30 ft. of water is provided for at low water. The same company has also been awarded a contract for sinking a caisson for the foundations of an extension to the power house of the Union Electric Light & Power Company, St. Louis, Mo.

ROAD ROLLER.—Flint, Mich.—Following bids were received Feb. 20 by D. E. Newcombe, Cy. Clk., for furnishing ten-ton road roller; action on bids was to be taken by Council Finance Committee March 6: Kelly-Springfield Road Roller Co., roller, with wheel to operate rock crusher, 50 ft. of hose, siphon jet, pump, steel picks, plow and harrow, $2,800; Julian Scholl & Co., Universal roller (new), $3,000; (slightly used), $2,800; (9 tons), $2,650; Heisler make, $2,550; Buffalo Steam Roller Co., roller, $2,900; American Road Roller Co., roller, $3,000; combination roller, $2,000; general purpose roller, $2,550; single engine roller, $2,550; duplex engine, $3,250; latest improved Kelly-Springfield, $2,450; Port Huron Engine & Thresher Co., cars, each, $200; roller, $2,375; roller (second-hand), $1,770; J. I. Case Co., roller, $2,340; Acme Road Machinery Co., standard roller, $2,500; spreading cars, each, $250; Vermilye & Power, standard roller, $2,250; spreading cars, each, $195.

ROCK DRILLS.—Washington, D. C.—Following bids per drill were received Feb. 28 by Isthmian Canal Commission for furnishing 25 pneumatic rock drills. Bids were taken on two types, (1) size 24E and (2) size 25F: McKiernan Drill Co., New York, (1) $227.50, (2) $237.50; Sullivan Mfg. Co., New York, (1) $269.54; (2) $231.15; Wood Drill Works, Paterson, N. J., (1) $219.76, (2) $256.42; Compressed Air Mfg. Co., San Francisco, Cal., (1) $329, (2) $354.37; Ingersoll-Sergeant Drill Co., New York, (1) $263.64, (2) $319.56; Rix Pressed Air Drill Co., San Francisco, Cal., (1) $300, (2) $325; John M. Rodgers, Gloucester City, N. J., (1) $389.65, (2) $421.05; Chicago Pneumatic Tool Co., Chicago, Ill., (1) $250.45, (2) $275.45; Rand Drill Co., New York City, (1) $265.40, (2) $318.58; Jeffrey Mfg. Co., Columbus, O., (1) $150, (2) $165.

LOCK.—Cincinnati, O.—Bids were received Feb. 25 by Lt.-Col. E. H. Ruffner, U. S. Engrs., for building Lock No. 1 on Tug Fork of Big Sandy River and for building Lock No. 1 on Levisa Fork of same river, the itemized bids for the latter piece of work being given under Contract Prices. The total bids for building Lock No. 1 on Tug Fork were as follows: Continental Engineering & Contracting Co., Buffalo, N. Y., $106,077; Carpenter & Boxley, Clifton Forge, Va., $105,420, $105,900; Langhorne Contracting Co., Richmond, Va., $135,610, $135,930; J. C. Thomas, Louisa, Ky., $102,140, $103,420; Dravo Contracting Co., Pittsburg, Pa., $117,580, $117,369; Louis R. Eigenmann and Chas. Lieb, Rockport, Ind., $137,662, $138,302; Mason & Hoge Co., Frankfort, Ky., $122,195, $122,355; E. G. Nave & Bros., Portsmouth, O., $121,855, $122,015+ Hollenbach & May Contracting Co., Evansville, Ind., $92,730; Baker Contract Co., Pittsburg, Pa., $99,460; Ferro-Concrete Construction Co., Cincinnati, O., $110,420, $110,740.

## U. S. POSSESSIONS AND CUBA.

***The names of parties awarded contracts are printed in capital letters.***

PLANT AND ENGINEERING MATERIAL DELIVERED AND ORDERED FOR THE ISTHMIAN CANAL.—Panama.—B. M. Harrods, of the Commission, sends us the following data relating to material for the work:

| Date of Purchase. | Number. | Date of Shipment. |
|---|---|---|
| | Steam Shovels. | |
| Sept. 1, 1904. | 1 70-ton = 2½ yds. | Sept. 8, 1904. |
| Sept. 1, 1904. | 2 95-ton = 5 " | Oct. 13 and 26, 1904. |
| Oct. 26, 1904. | 5 70-ton = 2½ " | Dec. 20, 1904, and |
| Oct. 1904. | 6 95-ton = 5 " | Jan. 6, 1905. |
| Jan. 27, 1905. | 3 70-ton = 2½ " | |
| | 17 | |

In addition, a French 1½-yard bucket shovel has been repaired.

| | | |
|---|---|---|
| | Unloaders and Plows. | |
| Dec. 3, 1904. | 1 60-ton. | Jan. 4, 1905. |
| Dec. | 2 25-ton. | Feb. 15, 1905. |
| | 3 | |
| | Earth Spreaders. | |
| Dec. 6, 1904. | 3 | Feb. 26, 1905. |
| Jan. 17, 1905. | 1 | April 7, 1905. |
| | 4 | |
| | Dump Cars. | |
| Jan. 1905. | 48 | |

There are, in addition, not less than 2,000 French dump cars of about five yards capacity, now undergoing repair.

| | | |
|---|---|---|
| | Steel Flat Cars. | |
| Oct. 25, 1904. | 200 40-ton. | |
| Feb. 4, 1905. | 800 40-ton. | |
| | 500 | |
| | Stone Crushers. | |
| Jan. 26, 1905. | 1 | |
| Feb. 15, 1905. | 2 Nos. 5 and 8. | |
| | 3 | |
| | Drills. | |
| Feb. 28, 1905. | 25 3½-inch. | |
| | Steel Rails. | |
| Feb. 2, 1905. | 2,500 tons 70 lbs. | March. |

There are now on the Isthmus about 175 miles of 50-lb., 6-metre rails.

| | | |
|---|---|---|
| | Cross Ties. | |
| Dec. 1904. | 48,000 | Dec. 1904. |
| Jan. 7, 1905. | 10,000 | Jan. 1905. |
| | 10,000 | Feb. 7, 1905. |
| Jan. 25, 1905. | 100,000 | |
| Feb. 14, 1905. | 10,000 | |
| | 178,000 | |

Explosives and other engineering supplies have been forwarded in the quantities required.

Basing an estimate of progress on the steam shovel capacity as now installed and under contract, and assuming one bucket, two-thirds full, per minute, for nine hours daily, and for 20 days per month, the output in eight years would be 44,240,640 cu. yds. In other words, the excavation of the Culebra Cut (43,000,000 yds.) for such a canal as was designed by the Commission of 1899-1901, with locks and a summit level at from 85′ to 90′ above sea level, could be accomplished in less than eight years, which was the time estimated by the previous Commission. It is well known that all other parts of the canal can be built during the time required for the Culebra Cut.

## MEXICO.

BROOM FACTORY.—Santa Rosalia, Chihuahua.—E. Avila, of Monterey, and Juan Creel, of Chihuahua, are perfecting arrangements for establishing a large broom factory at Santa Rosalia.

ELECTRIC LIGHTING PLANT.—Tlajomulco, Jalisco.—Mrs. Amparo Gonzalez has applied to the State Government for the concession for the establishment of an electric light plant in the town of Tlajomulco, Jalisco.

PEARL BUTTON FACTORY.—La Paz, Lower California.—The pearl button factory owned by Cornejo & Denegri, at La Paz, Lower California, is to be enlarged, and new machinery will be required.

BRIDGES.—City of Mexico.—Mexican Central Railway Co. is to rebuild several bridges on the line between Monterey and Tampico. It is reported that $500,000 will be expended in putting that portion of the system in good condition. Lewis Kingman, City of Mexico, is Ch. Engr.

BRICK MACHINERY.—City of Mexico.—Teoluyucan Brick Co., located near Teoluyucan, 36 kilometers north of this city, has decided to double the capacity of its existing plant, which has capacity of 1,000,000 bricks per month. An estimated expenditure of $100,000 is to be made in improvements.

CYANIDE PLANT.—Hostotipaquillo, Jalisco.—A cyanide plant is to be installed at once at the San Felipe mine, in the Hostotipaquillo district, Jalisco. The mines are owned by the Central Mining Co., of Philadelphia, Pa., which was organized by Col. N. Z Seitz. Clement L. Beard is Mgr. at mines.

MALT FACTORY.—City of Mexico.—Lee Kuhn, of Strauss, Kuhn & Company, City of Mexico, has acquired the concession which was held by Barrios Gomez for the establishment of a large malt factory here. The proposed plant will be erected adjacent to the distillery of the firm with which Mr. Kuhn is connected.

MINING MACHINERY.—Marfil, Guanajuato.—A custom mill, with a daily capacity of 100 tons, is to be built at Marfil, for the treatment of the low grade ores from the Guanajuato mines. D. V. A. Williams, a mining engineer, of the City of Mexico, is to have charge of the construction of the plant.

RAILROAD.—City of Mexico.—It is announced that the National R. R. of Mexico will build a branch line from a point of its main line to the City of Guadalajara, a distance of about 200 miles. Surveys for the line are now under way. R. T. MacDonald, City of Mexico, is Ch. Engr.

COAL-FIELD DEVELOPMENT.—Sabinas, State of Coahuila.—William C. Beckman, of Parral Mexico, has taken up the matter of developing the coal-field which he owns, situated near Sabinas, with a syndicate of Pittsburg, Pa., men. If the pending negotiations are consummated, a large amount of machinery will be installed, and the mining operations conducted on a large scale.

MINING MACHINERY. — Sonora. — Northern Sierra Madre Mining Co., 404 Crossley Bldg., San Francisco, Cal., has acquired extensive mining properties in the state of Sonora, and an expert has been sent to examine and report on plans for development. Considerable machinery will probably be required. Charles K. Blender is Pres., and S. G. Thomas, Mgr.

WATER-WORKS.—Torreon.—E. A. Conway, of Milwaukee, Wis., and associates have taken over the project of constructing a complete system of water-works in Torreon. The concession for the water-works enterprise is owned by Messrs. Mackin & Dillon, of Monterey, who will probably be given the contract by the new men who have become financially interested in the enterprise.

IRRIGATION SYSTEM, ETC.—San Luis Potosi.—An American colony is to be established partly in Tamaulipas and partly in San Luis Potosi by B. W. Shepard, of Enid, Okla., and Charles P. Brown and W. N. Edwards, of Chickasha, Ind. T. Arrangements will be made for surveying and laying out the tracts of land, which consists of 190,000 acres. An irrigation system will be installed immediately. The colony is about 40 miles west of Tampico.

IRRIGATION SYSTEM.—Nueva Leon.—Messrs. Farias & Garcia, of Monterey, have obtained a concession to establish a large system of irrigation just west of Monterey. They will build one large masonry dam, to form a water storage reservoir, of a capacity of about 250,000,000 gallons. The water will be conveyed over the land by means of pipe lines and irrigation ditches. Engineer Jose Heljar y Hare, of Monterey, will have charge of the construction work.

RAILWAY.—Leon-Guadalajara.—Lic. Agustin Arroya de Anda, City of Mexico, is reported to be treating with the Federal Government for a concession for the construction and operation of a railroad from the city of Leon, state of Guanajuato, to Guadalajara, capital of the state of Jalisco; also another line from Leon to Dolores Hidalgo, in the state of Guanajuato. The lawyer referred to is said to represent a strong company in the United States, which proposes to carry out the work.

## FOREIGN CONTRACTS—EXPORT NEWS.

***The names of parties awarded contracts are printed in capital letters.***

PUBLIC WORKS.—Cape Colony.—Municipality of Rondebosch proposes to borrow $165,000 for public works. Of this sum about $37,000 is for storm water drains.

RAILWAY.—Ottoman Empire.—Anatolia Ry. Co. is stated to be having surveys made with a view to doubling its line between Haidar-pacha and Pendik.

RAILROAD LINES—Norway.—The Norwegian Government has asked the legislature for a grant of $8,040,000, the bulk of which is to be expended for the construction of new railroad linees.

ELECTRIC PLANT.—Dutch Indies.—I. Schontendorp, Attorney at Law, Batavia, Java, has obtained a concession for erecting a large electric power station at the falls of Toentang, which is to supply the city of Saerabaya, Java, with light and power.

COLD STORAGE PLANTS—Argentina.—Two extensive cold-storage plants are projected in Buenos Aires. Francisco Seeber, calle Paraguay y Avenida Rosales, and to Exequiel Ramos Mejia, Buenos Aires, are reported to be interested.

STEEL RAILS AND FISH PLATES—Australia.—Bids are asked by Agent-General for Victoria, 142 Queen Victoria St., London, E. C., England, until April 10 for manufacture, supply and delivery of steel rails and fish plates for Victorian Railways.

IRRIGATION WORKS.—India.—The Secretary of State for India in Council has sanctioned the projected estimates for irrigation works in the Punjab. Estimates call for expenditure of $39,100,000 and provide for construction of 2,714 miles of canals.

POWER PLANT.—Italy.—Jacob Rieter & Co., of Winterthur, have applied for an appropriation of water from the river Dora Baltea at the point called Chalet di Montità for the production of power for an electric railway. The cost of the installation required is estimated at about $63,000.

MINING DEVELOPMENT.—Africa.—We are informed that the Société minière der Bazina has been formed in Paris, France, for the working of a metalliferous deposit called Bazina, situated in the district of Mateur (Tunis), and of any other mines of which it may become the concessionaire or owner, as well as for everything referring to the sale of their products and to their metallurgical treatment. The company, whose headquarters are situated at Paris, 3 rue Pillet-Will, has a capital of $100,000. Messrs. Eugene Azuelos, H. E. Boyer, Raoul Ignazi, Charles Schaefer and Francis Urruty have been nominated administrators.

STREET IMPROVEMENTS, ELECTRIC TRAMWAY, ETC.—Spain.—Tenders will be opened at noon, April 19, in the "Casa Consistorial," Madrid, for carrying out an improvement scheme comprising extension of Calle de Preciados and construction of roadway between Plaza del Callao and Calle del Alcalá, the execution of drainage works, the laying down of water mains, the erection of street lamps, etc. The upset price is about $1,912,000. The successful contractor will be assigned the right to construct and work, for a term of 40 years, an electric tramway along the new streets; subject to the plans for this tramway being approved by the Minister of Agriculture, Industry, Commerce and Public Works. The holder of the contract, or his legal representative, will be required to reside in Madrid from the date of the commencement of the works until the date on which they are handed over to the Municipality. The conditions of contract, etc., are on view in the offices of the Secretary of the Ayuntamiento, Madrid. A deposit of about $7,600 is required to qualify any tender. Local representation is necessary.

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## INDUSTRIAL NOTES.

**OUR READERS are requested to send short notes regarding new contracts that they are about to award, or have secured, for our news columns. Changes in firms' names and addresses are also wanted. "Write-ups" will not be inserted under any circumstances, as notes must contain news of interest to our readers. If our readers are in the market for any kind of machinery, tools, etc., we shall be glad to send them names of responsible firms making what they want.**

JOHN F. ALLEN, 370-372 Gerard Ave., N. Y. City, who builds the Allen Portable Pneumatic Riveting Machines, has just shipped two of his riveters to each of the branches of the American Car & Foundry Co. at St. Louis, Mo., and Madison, Ill. This shipment makes 50 riveters of the Allen make which the Am. C. & F. Co. now have in use in its plants.

G. M. GEST, of New York and Cincinnati, reports that on the steamer "Vigilancia," which sailed Thursday, Jan. 19, bound for Mexico, in the passenger list were some 15 men, all conduit experts in his employ. These men are bound for the City of Mexico in connection with a contract Mr. Gest has in that city for building a subway system through the entire city for the Mexico Light & Power Co. Besides this several complete carloads of tools have been forwarded by the all-rail route during the same week. Mr. Gest expects to send other crews abroad on work, which is just being put in contract form.

THE F. K. WILLS CONSTRUCTION CO., Wilmington, Del., in 1903 undertook a contract with the engineering department of the U. S. Government for the construction of a bulkhead in the Delaware River between Edge Moor and the Christiana River jetty, a part of a scheme for giving Philadelphia a 30-ft. channel to the sea. The work called for 11,000 piles and approximately 4,000,000 feet of yellow pine timber. The company has pushed the work to practical completion. As suggested, this company, formed largely to take up this contract, will not continue in the same line of business and will be succeeded by the Tatnall-Brown Co., a corporation, and Franklin K. Wills & Co., a firm, both company and firm being composed of officers and practical men of the old company.

CLARANCE E. FEE, Secy. to U. S. Consul at Bombay, India, writes us under date of Dec. 8, that an Industrial and Agricultural Exhibition under the supervision of the India National Congress. It is for the promotion of trade interests generally, but more particularly to show the Indian mind the advantages to be gained—the scientific end of up-to-date machinery and appliances. American machinery and tools are gradually increasing in this market, and have a very good name. The influence of the exhibition will be felt in a far deeper measure than is at first apparent. Mr. Fee adds that "your publication, which is received regularly at this office, has been placed in one of the machinery booths, and I am sure that it will be of great interest to those desiring information about machinery of all kinds. Engineering News is a great help to the Consul in answering inquiries relative to machinery, etc."

THE AMERICAN RY. APPLIANCE EXHIBITION, in connection with the International Railway Congress, to be held in Washington, D. C., May, 1905, is sending out through the General Committee of Arrangements, an address to the manufacturers of and dealers in railway appliances requesting the attention of those interested to this very important meeting. The congress of the U. S., with the approval of the President, has honored the manufacturers of railway appliances by the passage of an act permitting an exhibition of their products to be made on a part of the Monument Grounds, Washington. The Director of Exhibits has been authorized by the committee to invite applications for membership and for exhibit space under certain rules and regulations prescribed by the committee. Fees for membership and for exhibit spaces will be fixed by the committee at figures to insure financial solvency—a surplus can be readily returned pro rata. Geo. A. Post is Chn. of the Committee, with offices at 160 Broadway, New York.

THE SCHERZER ROLLING LIFT BRIDGE CO., Monadnock Block, Chicago, reports that the second Scherzer rolling lift bridge for the Central R. R. Co. of N. J. across Newark Bay, is rapidly nearing completion. This bridge is being erected in its closed position and constantly carries the railroad traffic without interruption. During January Scherzer bridges were completed and placed into active service at 18th St., Chicago; So. Mich. St., Buffalo; Swale River, Eng., for the South Eastern & Chatham Ry. During February the following additional Scherzer bridges will be completed and placed in service: Union Ave., 3d Ave. and Hamilton Ave. bridges, across Gowanus Canal, Brooklyn; also the long span double-leaf Scherzer bridge at Manhattan Ave., across Newtown Creek Waterway, Brooklyn. The double-track, single-leaf, long span Scherzer bridge recently completed and placed into service for the N. & S. S. R. R., Cleveland, is being duplicated by the B. & O. R. R. Co., at Cleveland, at an adjacent site, where a center-pier swing bridge is being removed and replaced. Orders for a number of additional single, double and multiple track bridges of similar form have been booked by the Scherzer Co., construction contracts to be let this year. The contract for the construction of the Scherzer bridge for the B. & S. R. R. and the Pennsylvania R. R. at Buffalo, has recently been let and work of construction is now in progress. Construction work is also in progress on Scherzer bridges at 22d St and Harrison St., Chicago; Flushing, L. I.; Genesee Ave., Saginaw; over the Suir River, Ireland; Spaarne River, Holland; Saugus River, Boston; Malden River, Boston; West River at Kimberly Ave., New Haven; Four-track railroad bridges for the N. Y., N. H. & H. R. R. Co. at Cos Cob, Conn.; Westport, Conn.; and also across the Housatonic River, Conn. Among the foreign contracts on which the Scherzer company is now working is a highway bridge across the Ekaterinhofka River, St. Petersburg; also a deck bridge of arched outline, forming the movable portion of a long bridge connecting Barrow-in-Furness with Walney Island, Eng.

## READERS' WANTS

**If any one is in the market for any engineering or contracting supplies, the first thing to do is to refer to our advertising pages, but if the buyer cannot find what he wants we particularly ask that he notify us at once and we will inform the proper parties without cost to the inquirer. A copy of ENGINEERING NEWS BUYERS' GUIDE will be mailed to anyone upon application. This paper will always appreciate any news notes regarding public, or important private work, and will be pleased to receive detailed items. Requests to hold names will be complied with in every case. Do not fail to write our advertisers or us.**

BOILER.—Harrisburg, Pa.—C. A. Stauffer is reported in the market for a boiler.

ENGINE AND BOILER—Artia, Va.—Jno. W. Wagner is in the market for the above.

TOWER CLOCKS, ETC.—Ocala, Fla.—McIver & Mackay are in the market for the above.

ICE PLANT—Greers, S. C.—A. R. Wood is in the market for a 5-ton ice plant, laundry machinery, etc.

SAW RIP MACHINE.—Ashboro, N. C.—The Bardwell Lumber & Mfg. Co. is in the market for the above.

IRRIGATION PUMPS—Roanoke, Va.—The Standard Hydraulic Pump Co. is in the market for irrigation pumps.

TELEPHONE EQUIPMENT (30 miles)—Denton, Md.—J. F. Booth, it is reported, will soon be in the market for the above.

CONCRETE MIXERS.—Harvey, Ill.—C. E. Bathrick, 151 155th St., writes us that he wants catalogues of concrete mixers.

COGWHEELS, ETC.—Kiebs, Ind. T.—A. M. Frost is understood to be in the market for cogwheels and pinions.

RELAYING RAILS—West End, N. C.—McDonald Bros. are reported in the market for three tons of 16-lb. relaying rails.

WELL-CASING.—Marianna, Fla.—The Graceville Electric & Water Co. is in the market for 250 ft. of 6-in. well-casing, etc.

GAS PLANTS.—Statesville, N. C.—D. M. Coiner, 530 Tradd St., is reported in the market for the above, both small and large.

STEEL SPRINKLERS.—Ripon, Wis.—A. L. Mandem, Cy. Clk., writes us that the city is in the market for two street sprinklers.

CESSPOOL PUMPS.—Mineola (L. I.), N. Y.—We are informed that Henry Seaman, of Mineola, is in the market for cesspool pumps.

ELECTRICAL SUPPLIES.—Wilmington, N. C.—The Southern Electric Co., Old Courthouse Bldg., is in the market for the above.

WALL TIES.—Reynoldsville, Pa.—The Reynoldsville Brick & Tile Co. writes us that it is in the market for wall ties for brick work.

PLUMBERS' SUPPLIES, CEMENT, FELT, ETC.—Parkersburg, W. Va.—The Vaughn Supply & Roofing Co. is in the market for the above.

ROOFING PAPER, ETC.—Eagle Pass, Tex.—The Eagle Pass Transfer Co. is in the market for roofing paper, feed cutter, rice mill machinery, etc.

AIR COMPRESSORS (125-HP.) AND COAL CONVEYORS.—Allentown, Pa.—H. F. Bascom, Cy. Engr., writes us that he is in the market for the above.

VARNISH AND PAINT TINS.—Middleton, Pa.—C. H. Blatchley, C. E., writes us that he wants to correspond with manufacturers of paint and varnish tins.

30-HP. BOILERS, CRUSHERS (150 cu. yds.), FLUSH-TANKS, ETC.—San Antonio, Tex.—Jno. D. Pullman, Cy. Engr., writes us that he is in the market for the above.

CONCRETE MIXERS.—Mineola (L. I.), N. Y.—We are informed that the Nassau Concrete Works, Buhler and Bowdetter, Props. are in the market for concrete mixers.

DYNAMITE.—Japan.—F. D. Fisher, U. S. Consul at Tamsin, Formosa, reports that there is a demand for dynamite, and requests that manufacturers send catalogues, etc.

MINING SUPPLIES—Bryant, Ala.—The No. Ala. Coal Co. is reported in the market for a 36-in. gage locomotive, mining tools, pumps, machinery, pipe, cars, engines, etc.

AIR COMPRESSORS, ROCK DRILLS, PUMPS, AIR DRILLS, ETC.—Monroe, N. C.—J. H. Beckley is understood to be in the market for the above quarrying supplies.

DERRICKS, HOISTING ENGINES AND SURVEYING INSTRUMENTS.—New York, N. Y.—S. F. Miller, C. E., 1133 Broadway, writes us that he is in the market for the above.

MINING MACHINERY.—Baltimore, Md.—Wm. [illegible] Codd, 702 Lennox St., writes us that a new company wishes to install considerable new machinery, and is in the market for same.

15 HP. TRACTION ENGINE, SCRAP STONE CRUSHER, ROAD MACHINE, ETC.—Andrews, N. C.—J. Q. Barker, Chn. Hy. Com., writes us that he is in the market for the above.

BRIDGE RAILWAYS, LOW-BRIDGE TRUSSES, ETC.—Medina, O.—R. E. French, Contractor, writes us that he wants the names of bridge firms who manufacture the above up to about 75 ft. long.

IRRIGATION ENGINEERS AND CONTRACTORS.—Seattle, Wash.—W. P. Kelley, 109 Marion St., wants to get into correspondence with firms who will plan and build a plant to irrigate about 320 acres of land.

WELL-DRILLING MACHINERY, ETC.—Formosa, Japan.—F. D. Fisher, U. S. Consul at Tamsin, Formosa, reports that catalogues are wanted of manufacturers of well-drilling machinery, telephone and telegraph supplies, etc.

4 AND 6-IN. C.-I. WATER PIPE, PUMPS (300 gallons a min.), 100 × 8-FT. STAND-PIPE, 50,000-GAL. TANKS, ETC.—Lumberton, N. J.—The Lumberton Light, Water & Sewerage Co. writes us that it is in the market for the above.

180-KW. GENERATOR, 60 AND 120-KW. GENERATORS, 70 1,200-C. P. ARC LAMPS, 48 CLEAR OUTER GLOBES, ONE TRANSFORMER, ETC.—Greenwood, S. C. —A. J. Sproles, Supt. water and electric plant, writes us that the city is in the market for the above.

COAL TIPPLE.—Charleston, W. Va.—C. P. Peyton, Ch. Engr. Imboden & Odell R. R. Co., writes us that the company is in the market for a steel river coal tipple for handling standard gage railroad cars; capacity, 5,000 tons a day. Jas. Archbald, Consult. Engr., Scranton, Pa.

LABORATORY EQUIPMENT, CONCRETE MIXERS, GARBAGE DISPOSAL, SEWER CLEANING MACHINES, ROAD ROLLERS, ETC.—Coldwater, Mich.—Chas. G. Moore, Cy. Engr., writes us that he is in the market for the above. The laboratory will be used for the examination of sewage, etc.

COPPER WIRE FOR WATER SCREENS.—Camaguey, Cuba.—Rhoade Fisher, Jr., First Asst. Engr. Public Works, writes us that he wants to correspond with manufacturers of copper wire for water screens. Samples of the wire are wanted at once. Water-works and sewers to cost about $500,000 are to be built in Camaguey.

ROCK DRILLS, RIGS, TOOLS, OIL MAINS, DREDGING AND HOISTING MACHINERY, ETC.—Russia.—The Russian Sakhalin Oil Co., Illarionoff Bldg., Charkoff, Russia, writes us that the Russian Oil Co. is in the market for the above, in connection with the proposed improvements to its plant, and the construction of a seaport.

WATER PIPE, HYDRANTS, VALVES, CASTINGS, LEAD, JUTE, CEMENT, PUMPS, GASOLINE ENGINE, ETC.—Hughsville, Pa.—H. S. Frederick, Contractor, of Millersburg, Pa., writes us that T. F. Bradenbaugh and himself are in the market for the above, in connection with the proposed improvements to the water-works at Hughesville.

CATCH-BASINS, FLUSH-TANKS, PORTLAND CEMENT, GARBAGE WAGONS, MANHOLES, PAVING BLOCKS (3 ins.), ROD ROLLER, SEWER PIPE, ETC.—Lexington, Ky.—Thos. A. Combs, Mayor, writes us that the above supplies will be wanted by the city from time to time during the year. This city is planning considerable improvements to the sewers.

AIR COMPRESSORS, ASPHALT, BRICK, BRIDGES, CATCH-BASINS, CEMENT, COAL-HANDLING MACHINERY, CONCRETE CONSTRUCTION, DRAFTING ROOM SUPPLIES, DRAINAGE PUMPS, FLUSH-TANKS, GARBAGE DISPOSAL PLANT, MANHOLES, METERS, PAVING BLOCKS, SEWER CLEANING MACHINES, SEWER PIPE, STONE SIDEWALKS, STREET CLEANING BROOMS, WATER PIPE, WELL-DRILLING MACHINERY, ETC.—Duquesne, Pa.—H. H. Rankin, Boro. Engr., 301 Smithfield St., Pittsburg, Pa., writes us that the above materials are wanted by the city of Duquesne, the Mt. Olive Coal & Stone Co. and the Rankin Improvement Co., all of Duquesne.

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MARINE ENGINEERING has removed its publishing offices from 309 Broadway, New York, to the Whitehall Bldg.

STENDICKE, EGAN & ROE, Electrical Engineers, 61 Fulton St., N. Y., have dissolved partnership by mutual consent.

W. & L. E. EMLEY, Troy, N. Y., announce that they are now making physical and scientific instruments, as also standard weights and measures for schools.

THE NORDBERG MFG. CO., Milwaukee, reports that it will open an office at 42 Broadway, New York, to be in charge of F. W. O'Neil, Mech. & Min. Engr.

A. D. GRANGER CO., Contracting Engineers, New York, announce the opening of an office in Pittsburg under the management of E. W. Bentley, M. E., Bessemer Bldg.

THE HANNA ENGINEERING WORKS, 820 Elston Ave., Chicago, reports that Thos. W. Pangham Co., 42 Dey St., N. Y., and E. J. Etting, Harrison Bldg., Philadelphia, have been appointed exclusive agents for their territories.

H. EILENBERGER & CO. is the firm name of a new general contracting company incorporated at Chicago, and composed of Herman Eilenberger, H. A. Peters, F. H. Smith and H. F. Busch. The offices are in the Association Bldg., Chicago.

JOHN PEIRCE CO., 277 Broadway, New York, has been organized with a capital of $1,250,000, and will succeed to the granite and general contracting business carried on by Mr. Peirce. The new company also takes over the business of the N. Y. & Me. Granite Paving Block Co. H. S. Lanpher is Vice-Pres. and Treas; P. A. Gage is Secy.

THE UNION AKRON CEMENT CO., 141 Erie St., Buffalo, N. Y., announces that the partnership that has existed for 40 years, under the above name, has been dissolved. The Akron (Star Brand) cement will be sold hereafter by the Akron Cement Works, 1004 Morgan Bldg., Buffalo, and by the Newman's Akron Cement Co., 141 Erie St., Buffalo.

THE INTERNATIONAL STEAM PUMP CO., Harrison, N. J., advanced on the first of the month, all prices 10%. This company operates plants at Harrison, Boston and Holyoke, Mass.; Buffalo, and Cincinnati, and controls the firms of Henry R. Worthington, the Deane Steam Pump Co., the Geo. F. Blake Mfg. Co., the Knowles Steam Pump Works, the Snow Steam Pump Works, the Holly Mfg. Co., the Laidlaw-Dunn-Gordon Co., and the Clayton Air Compressor Works, producing a considerable percentage of the steam pumps, water-works pumping engines, air compressors, condensers, and other power-plant and hydraulic machinery used in this country.

MORSE, WILLIAMS & CO., Philadelphia, have opened a branch office at 1018 Penn Ave., Pittsburg, for the sale and erection of all classes of passenger and freight elevators. About 17,000 machines have been sold. The company has made the following recent installations: Hydraulic passenger and freight elevators, Kaufman Bros., Pittsburg; Union Station, Pittsburg; direct electric passenger and freight elevators: Keystone Warehouse Co., Buffalo; Buckingham Apartments, Pittsburg; belt and belt electric elevators: Diamond Match Co., Barbertown, O.; Westinghouse Elec. & Mfg. Co., Pittsburg; New York & Penna Co., Johnsonburg. This company already has offices in New York, Boston, Baltimore and Atlanta.

THE WILLIAM TOD CO., Youngstown, O., reports that Kansas City, Mo., has recently placed a contract with it for a large water-works pumping engine. The engine will be located in the Turkey Creek Pumping Station, at Kansas City, and will have a capacity of 20,000,000 gallons in 24 hours, against a normal head of 340 ft. and a fire head of 410 ft. The engine will be of the vertical triple expansion type, having steam cylinders 40 to 72 ins. and 108 ins. in diameter, by 66-in. stroke. The pumps will have three single acting plungers, 32⅜ ins. in diameter, by 66-in. stroke, and the engine will run at a piston speed of 220 ft. or 20 revolutions per minute. The guaranteed duty is 170,000,000 foot pounds per 1,000 pounds of commercially dry steam used. The total weight of the machine will be about 800 tons. The engine will be built at Youngstown, from the designs of Irving H. Reynolds.

## CONTRACT PRICES.

[Where (*) precedes items under Contract Prices the work was advertised in Engineering News.]

*LOCKS.—Cincinnati, O.—Bids were received Feb. 25 by Lt.-Col. E. H. Ruffner, U. S. Engrs., for building Lock No. 1 on Levisa Fork of Big Sandy River and for building Lock No. 1 on Tug Fork of same river, the total bids for the latter piece of work being given under Miscellaneous Contracts. The itemized bids for building Lock No. 1 on Levisa Fork are as follows: (1) Continental Engineering & Contracting Co., Buffalo, N. Y.; (2) Hollenbach & May Contracting Co., Evansville, Ind.; (3) Mason & Hoge, Frankfort, Ky.; (4) Louis P. Eigenmann and Chas. Lieb, Rockport, Ind.; (5) Baker Contract Co., Pittsburg, Pa.; (6) Dravo Contracting Co., Pittsburg, Pa.; (7) J. C. Thomas, Louisa, Ky.; (8) Ferro-Concrete Construction Co., Cincinnati, O.; (9) Carpenter & Boxley, Clifton Forge, Va.:

Bids received February 25, 1905, at Cincinnati, O., by Lt.-Col. E. H. Ruffner, U. S. Engineers, for Building Lock No. 1 on Levisa Fork of Big Sandy River.

| Items. | Quantities. | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|---|
| Piling | 3,450 lin. ft. | .40 | .50 | .55 | .50 | .50 | .50 | .40 | .65 | .47 |
| Coffer-dam timber | 98,000 B. M. ft. | 61.00 | 60.00 | 57.50 | 75.00 | 50.00 | 60 25 | 60.00 | 80.00 | 60.00 |
| Rip-rap | 850 cu. yds. | 1.00 | 1.50 | 2.00 | 3.00 | 2.00 | 2.05 | 1.50 | 2.50 | 3.00 |
| Rock excavation | 4,600 cu. yds. | 1.00 | 1.75 | 3.00 | 3.00 | 2.00 | 1.85 | 2.50 | 3.00 | 1.65 |
| Earth Excavation | 30,000 cu. yds. | .35 | .50 | .60 | .85 | .30 | .40 | .75 | .75 | .62 |
| Embankment | 800 cu. yds. | .35 | .50 | .75 | 1.00 | .50 | .36 | .50 | .50 | 1.00 |
| Puddling | 100 cu. yds. | 1.00 | 1.00 | 2.00 | 5.00 | 2.00 | 1.20 | 3.00 | .50 | 2.00 |
| Concrete | 7,100 cu. yds. | 4.70 | 4.00 | 5.00 | 5.50 | 4.25 | 5.00 | 4.50 | 4.15 | 4.50 |
| Pivot stones | 4 pieces | 75.00 | 50.00 | 50.00 | 50.00 | 40.00 | 42.00 | 50.00 | 25.00 | 50.00 |
| Timber in permanent work | 11,500 B. M. ft. | 100.00 | 60.00 | 75.00 | 75.00 | 80.00 | 60.00 | 100.00 | 80.00 | 60.00 |
| Iron and steel | 260,000 lbs. | .0675 | .05 | .065 | .065 | .06 | .06 | .05 | .054 | .075 |
| Totals | | $76,058 | $74,720 | $95,295 | $109,237 | $73,980 | $82,248 | $89,535 | $93,482 | $89,581 |

*PORTLAND CEMENT, BROKEN STONE, SCREENING, SAND.—Newport, R. I.—Bids were opened Feb. 23 by Lt.-Col. J. H. Willard, U. S. Engrs., for furnishing Portland cement, broken stone, etc., at Boston Neck and Fort Adams, the bids received being as follows: (1) For 5,000 bbls. Portland cement at Boston Neck, (2) for 5,100 bbls. Portland cement at Fort Adams: Commercial Wood & Cement Co., New York, Atlas Brand, (1) $1.68, (2) $1.68; Berry & Ferguson, Boston, Mass., Pennsylvania Brand, (1) $1.61, (2) $1.61; Pennsylvania Cement Co., New York, Pennsylvania Brand, (1) $1.63, (2) $1.63; Atlas Portland Cement Co., New York, Atlas Brand, (1) $1.49, (2) $1.49; Alpha Portland Cement Co., Boston, Mass., Alpha Brand, (1) $1.56, (2) $1.60 at site and $1.58 at wharf; Windsor Cement Co., Boston, Mass., Catskill Brand, (1) $1.43, (2) $1.49 at wharf and $1.43 at site. For furnishing 3,800 cu. yds. broken stone and 500 cu. yds. screenings, at Boston Neck, Clinton Point Stone Co., New York, bid $1.98 per cu. yd. for each, and J. K. Sullivan, Newport, R. I., bid $1.88 for each. The latter also bid $1.25 per cu. yd. for 2,300 cu. yds. sand at Boston Neck, and $1.39 per cu. yd. for 2,000 cu. yds. sand at Fort Adams. For furnishing 3,800 cu. yds. broken stone and 300 cu. yds. screenings at Fort Adams, John F. Sullivan bid $1.73 for the former at site, and $2.37 per cu. yd. for latter at site; Clinton Point Stone Co. bid $1.95 at site for each; James J. Dugan, Newport, R. I., bid $1.87 at site for each, and J. K. Sullivan bid $1.85 at site for each.

DAM AND BRIDGES.—Phoenix, Ariz.—The following bids were received Feb. 23 by U. S. Geological Survey, Reclamation Service, for construction of Roosevelt Dam, Salt River Project, Arizona:

BIDS RECEIVED FEBRUARY 23, 1905, AT PHOENIX, ARIZ., BY U. S. GEOLOGICAL SURVEY-RECLAMATION SERVICE, ON CONSTRUCTION OF ROOSEVELT DAM.

| Names and Addresses. | Time. | Excavation for Foundation. | | | Masonry. | | | Concrete. | | Over-haul in excess of 300 ft. Per cu. yd. | Totals. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Class 1, 50,000 cu. yds. Per yd. | Class 2, 6,000 cu. yds. Per yd. | Class 3, 20,000 cu. yds. Per yd. | Dam, 300,000 cu. yds. Per yd. | Coping, 400 cu. yds. Per yd. | Wing walls, 6,000 cu. yds. Per yd. | 2 Bridges. | 4 Bridge Piers, 600 cu. yds. Per yd. | | |
| John M. O'Rourke & Co., Galveston, Tex | 2 years | $1.75 | $5.00 | $1.50 | $3.15 | $20.00 | $4.75 | $15,000 | $6.00 | .15 | $1,147,600 |
| Broderick & Ward, St. Louis, Mo | 17 months | .96 | 3.50 | 2.75 | 3.10 | 15.00 | 15.00 | 33,000 | 7.00 | .05 | 1,187,200 |
| Geddis & Seerie Stone Co., Denver, Colo | 33 months | 2.00 | 4.00 | 1.00 | 3.35 | 10.00 | 4.00 | 11,000 | 4.00 | .05 | 1,190,400 |
| Edward Malley & Co., San Francisco, Cal | 26 months | 2.50 | 7.00 | 3.00 | 3.25 | 8.00 | 3.00 | 8,000 | 5.00 | .05 | 1,234,200 |
| Carl Leonardt, Los Angeles, Cal | 23 months | 2.30 | 1.50 | 1.50 | 3.45 | 24.00 | 3.45 | 13,000 | 5.50 | .10 | 1,235,600 |
| Mason Hoge Co., Frankfort, Ky | 3 years | 1.65 | 2.60 | 2.60 | 3.49 | 6.25 | 4.13 | 12,000 | 5.00 | .01½ | 1,239,380 |
| MacArthur Brothers Co, Chicago, Ill | 33 months | 1.75 | 3.50 | 2.50 | 3.70 | 20.00 | 7.00 | 10,000 | 6.00 | .02 | 1,332,100 |
| Griffiths & McDermott, Chicago, Ill | 30 months | 2.25 | 4.00 | 2.00 | 3.80 | 6.50 | 3.25 | 5,150 | 3.40 | .02 | 1,345,790 |
| Deeks & Deeks, St. Paul, Minn | 2¼ years | 4.00 | 8.00 | 1.25 | 3.50 | 10.00 | 4.00 | 12,000 | 8.00 | .03½ | 1,367,800 |
| E. B. & A. L. Stone Co., Oakland, Cal | 40 months | 5.00 | 10.00 | 2.00 | 3.25 | 30.00 | 7.50 | 11,000 | 8.00 | .05 | 1,397,800 |
| Mosier De Graff Contracting Co., Buffalo, N. Y | 2½ years | 2.50 | 3.50 | 1.50 | 3.85 | 25.00 | 3.85 | 28,600 | 12.00 | .20 | 1,399,900 |
| Winters, Parsons & Boomer, Spokane, Wash | 2¼ years | 5.40 | 8.00 | 1.25 | 3.50 | 10.00 | 4.00 | 8,000 | 4.00 | .01⅛ | 1,431,400 |
| San Francisco Bridge Co, San Francisco, Cal | 35 months | 2.50 | 5.00 | 3 00 | 4.11 | 10.00 | 5.00 | 10,000 | 4.00 | .03 | 1,494,400 |
| Johnson-Sherman Const. Co., Oklahoma City, Okla | 27 months | .75 | 6.50 | 3.40 | 4.71 | 10.50 | 4.40 | 9,200 | 7.40 | .07 | 1,601,740 |
| Bentley-Tuttle & Pelton Co., San Francisco, Cal | 28 months | 3.70 | 7.50 | 4.15 | 5.05 | 8.00 | 5.50 | 12,000 | 5.50 | .02½ | 1,879,500 |
| Prendergast & Clarkson, Chicago, Ill | 700 days | 2.85 | 7.00 | 2.35 | 5.25 | 20.00 | 8.00 | 30,000 | 6.00 | .07½ | 1,896,100 |
| Faris-Kesl Construction Co., Ltd., Boise, Idaho | 2 years | 3.35 | 5.25 | 2.50 | 5.40 | 15.00 | 7.50 | 28,000 | 6.00 | .10 | 1,951,600 |
| American Construction Co., Denver, Colo | 3 years | 1.50 | 3.00 | 2.50 | 7.40 | 12.00 | 8.75 | 20,000 | 7.50 | .03 | 2,444,800 |
| B. M. Zadeck Co., Chicago, Ill | 2½ years | 7.50 | 8.30 | 2.00 | 7.17 | 25.00 | 6.55 | 16,600 | 7.00 | .20 | 2,685,900 |
| *R. H. Hood Co., New York, N. Y | 21,000 work hrs. | .... | .... | 3.00 | 3.35 | 10.00 | 4.50 | ...... | 6.00 | .04 | .......... |
| *Bentley-Tuttle & Pelton Co., San Francisco, Cal | 23 months | 3.70 | 7.50 | 4.15 | 4.94 | 8.00 | 5.50 | 12,000 | 5.50 | .02½ | 1,846,500 |
| *Burrell Construction Co., Oakland, Cal | 3 years | 3.00 | 6.00 | 2.00 | 3.90 | 6.00 | 3.90 | 10,000 | 4.00 | .03 | 1,434,200 |

* Informal.

PIPE SEWERS.—Seattle, Wash.—Bids were received Feb. 25 by C. B. Bagley, Secy. Bd. Pub. Wks., for constructing pipe sewer in Westlake Ave. The price bid per lin. ft. includes excavation. Most of the work will be wagon haul of several blocks and there will be about two blocks of slight cut; contract will be awarded to lowest bidder. Bids received were as follows, all bidders being from Seattle; (1) P. J. McHugh, (2) Stirrat & Goetz, (3) A. C. Goerig, (4) International Construction Co., (5) Holt & Maguire, (6) C. J. Erickson:

Bids received at Seattle, Wash., February 25, 1905, by C. B. Bagley, Secretary Board of Public Works, for Constructing Pipe Sewer in Westlake Avenue.

| Items. | Quantity. | (1) | (2) | (3) | (4) | (5) | (6 |
|---|---|---|---|---|---|---|---|
| Earth excavation | 68,000 cu. yds. | .35 | .30 | .20 | .24 | .24 | .25 |
| Rock excavation | 50 cu. yds. | 1.00 | .01 | .60 | 2.60 | .01 | .25 |
| Concrete bulkhead | 100 cu. yds. | 7.00 | 8.00 | 8.00 | 7.30 | 6.75 | 7.00 |
| Manhole, 4½ ft | 1 | 75.00 | 70.00 | 45.00 | 70.00 | 50.00 | 60.00 |
| Lumber sidewalks | 105 ft. B. M. | 16.00 | 14.00 | 14.00 | 22.00 | 14.00 | 12.00 |
| 8-in. sewer | 350 ft. | .75 | 1.25 | .75 | 1.00 | .95 | 1.25 |
| Clearing and grubbing | Lump sum. | 1,000.00 | 1,000.00 | 500.00 | 3,700.00 | 600.00 | 1,500.00 |
| Bulkhead iron | 44,000 lbs. | .06 | .05 | .05 | .06¾ | .06 | .04 |
| Bulkhead lumber | 320 M. ft. B. M. | 18.00 | 15.00 | 15.00 | 17.50 | 20.00 | 14.00 |
| Railing | 350 lin. ft. | .10 | .11 | .10 | .12 | .13 | .25 |
| Fixed estimate | $2,000 | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 |
| Totals | | $38,797 | $34,091 | $26,537 | $35,498 | $31,567 | $31,285 |

BINDER STONE, ASPHALT, ASPHALT OIL, ETC.—Detroit, Mich.—Following bids were received Feb. 27 by Department Public Works, Walter Barlow, Secy., for furnishing binder stone, asphalt, asphalt oil, etc.: Binder stone, per ton—Shotwell & Chamberlain, 90 cts.; C. H. Little & Co., 90 cts.; H. Houghten, 87½ cts. Sand for asphalt paving purposes, per cu. yd.—H. Houghten, bank sand, 56 cts. Limestone dust, per ton—H. Houghten, $2.80; Buffalo Cement Co., $4.90. Asphalt, per ton—Warner-Quinlan Asphalt Co., $25 (Venezuelan), $24 (Cuban), $28 (Trinidad); Trinidad Asphalt Mfg. Co., $27.80 (B.pure); H. L. Hutson, $16 ("D" grade California); Bernard Bienenfeld, $19 (California?); Barber Asphalt Paving Co., $20 (Trinidad), $23.45 (Bermudez), $23.35 (Sonoco), $23 (Solidad), $26 (Genasco); Warren Chemical Mfg. Co., $20 (Ebano, Mex.); A. L. Barber Asphalt Co., $22.90 (Bermudez); Detroit Builders & Pavers' Supply Co., $20.90 ("D" grade California); Wm. J. Clancey, $23.50 (Brut, Selenitza), $29.25 (B.pure, Selenitza), $26.75 (Fluxed, Selenitza); California Asphaltum Sales Agency, $17.10 (Grade "D" California); Warren Asphalt Paving Co., $28.50 (Acme); James Hanley, $29 (Obispo); Hercules Oil Refining Co., $17 (Grade "D"), $17 (Grade "E"). Asphalt oil, (1) per ton and (2) per gallon—Hercules Oil Refining Co., (1) $20 (California oil); Detroit Builders & Pavers' Supply, bbls., (1) $22 (California oil); tank cars, (1) $12.90 (Paragon); Jas. Hanley, (1) $29.50 (Obispo); Sun Oil Co., tank cars, (1) $15.75, (2) .0635 ct. (Texas); bbls., (1) $22.15, (2) .0895 ct. (Texas) (50 cts. for empty bbls.); tank cars, (1) $10.35, (2) .0692 ct. (Eastern Pet); bbls., (1) $16, (2) .0617 ct. (Eastern Pet); California Asphaltum Sales Agency, (1) $19.98; Craig Oil Co., tank cars, (1) $10, (2) .0385 ct. (Eastern Pet); H. L. Hutson, (1) $19.30 (California oil); (if offered on "D" grade asphalt is accepted), (1) $18 (California oil).

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## TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3½ × 6 ins., 6 × 9 ins., and 9 × 12 ins.)

GEARS.—C. O. Bartlett & Snow Co., Cleveland, O. Paper; 6 × 9 ins.; pp. 20.

A list of patterns of spur, bevel, miter and worm gears which this company has on hand.

ELECTRIC CLUTCH.—Williams Electric Machine Co., Akron, O. Paper; 6 × 9 ins.; pp. 4.

The Williams electric clutch is a new magnetic clutch for shafting transmission, but its construction is not clear from this brief circular. It is said to be different from the "so-called magnetic clutches" and is claimed to always operate perfectly.

GAS ENGINE IGNITERS.—Goodson Electric Ignition Co., Providence, R. I. Paper; 8 × 11 ins.; pp. 4.

The Goodson igniter is a magneto with rotatable magnet frame by which the lead of the spark can be varied. The Goodson spark plug has an electro-magnet which causes a break of circuit between the spark points just at the moment the current impulse is furnished from the generator.

VALVES.—The Crane Co., Chicago, Ill. Paper; 10 × 15 ins.; pp. 16; illustrated.

Under the title "The Valve World," a sort of trade journal is here presented, with the specific purpose of advertising the Crane valves and pipe fittings.

CENTRIFUGAL PUMPS.—R. D. Wood & Co., Philadelphia, Pa. Paper; 8½ × 11 ins.; pp. 16.

Shows and lists centrifugal pumps and direct connected pump units in a very great range of sizes and capacities.

RAILWAY TIES.—Avery Stamping Co., Cleveland, O. Paper; 8½ × 11 ins.; pp. 4; illustrated.

The Avery steel tie here shown consists of a T-shaped cross-bar and two pressed steel rail seats which are locked together by the rail base.

INJECTORS.—Hayden & Derby Mfg. Co., 85 Liberty St., New York. Paper; 4 × 6 ins.; pp. 48; illustrated.

This is a thoroughly good small-sized catalogue of Metropolitan injectors, giving illustrations, diagrams, tabulated data and items of information about injectors, ejectors and accessories.

BIOGRAPHY AND DROP FORGINGS.—Wyman & Gordon, Worcester, Mass. Paper; 4½ × 7 ins.; pp. 8.

The January, 1905, number of Wyman & Gordon's well-known "Short Stories" deals with Charles Babbage and his calculating machines.

INJECTORS.—Hancock Inspirator Co., 85 Liberty St., New York. Paper; 6 × 4 ins.; pp. 54; illustrated.

A brief description of the works of the Hancock Inspirator Co. is followed by a catalogue of their make of injector, excellently illustrated and well provided with numerical data and text information.

STEAM ENGINES.—Watertown Steam Engine Co., Watertown, N. Y. Paper; 9 × 6½ ins.; illustrated.

An illustrated circular advertising the Watertown semi-Corliss engines, which are made with four valves but with or without releasing gear, depending upon the running speed.

INSULATORS AND PINS.—Locke Insulator Mfg. Co., Victor, N. Y. Paper; 6 × 9 ins.; pp. 56.

This is a complete catalogue of Locke insulators, including line, dead-end, wall and strain insulators of various kinds, both porcelain and flint glass, also pins of various kinds—steel, wood and porcelain combination pins—and some accessories.

KEROSENE ENGINES.—Universal Kerosene Engine Co., 137 Liberty St., New York. Paper; 6 × 9 ins.; pp. 4; illustrated.

The Universal kerosene engine is recommended here for running a small electric lighting plant to light a single residence or the like. Excellent and economical operation, and accurate regulation, are claimed for the engine. It is made in sizes from 2½ to 25 HP.

STEEL TRACK CONSTRUCTION.—American Railway Tie & Girder Co., Pittsburg, Pa. Paper; 5 × 6¾ ins.; pp. 16; illustrated.

This describes the Duff system of construction, in which the rails (for street or steam railway) are carried by steel longitudinals of inverted trough section, connected by channel tie bars. The rails are attached by keys and clamps.

SCIENTIFIC INSTRUMENTS.—Williams, Brown & Earle, 918 Chestnut St., Philadelphia, Pa.

Two recent circulars of this firm show, first, a reflecting electric lantern for lantern projection from opaque objects; and, second, a spinthariscope. The firm handles radio-active minerals of all kinds, phosphorescent and fluorescent objects, and lists a large number of lantern slides illustrating work with radium.

BELT AND ROPE WHEELS.—Dodge Mfg. Co., Mishawaka, Ind. Paper; 9¼ × 12 ins.; pp. 16; illustrated.

Various types of fly-wheels, belt and rope driving wheels are shown here, and special notice is made of the Dodge system of hardwood lagging for belt wheels and rope drive wheels. It is stated that pulleys of the wood lagged type have been tested to rim speeds of over 5½ miles per minute without any indication of weakness.

PAINTS FOR METAL.—National Paint Works, New York City. Two pamphlets; 6 × 9 ins.; pp. 16 and 47; illustrated.

The first of these pamphlets relates to the special paints compounded by the firm named for gas-holders and other tank work. The conditions to be met are discussed, and the claims for the proposed paints are presented in detail. The second pamphlet contains a general discussion of paints for metal, with a description of the several paints made by the firm for this purpose.

ROTARY CONVERTERS.—Bullock Electric Mfg. Co., Cincinnati, O. Paper; 6 × 9 ins.; pp. 12; illustrated.

Some interesting remarks on rotary converters are accompanied by illustrations of such machines and the parts.

ELECTRIC INSTRUMENTS.—Ft. Wayne Electric Works, Ft. Wayne, Ind. Paper; 8 × 10½ ins.; pp. 4; illustrated.

A portable instrument is shown here, for use in calibrating wattmeters.

OIL SWITCHES.—Westinghouse Electric & Mfg. Co., Pittsburg, Pa. Paper; 7 × 10 ins.; pp. 20; illustrated.

Circular 1096 of the company's serial issues brings together a general summary of oil switches and circuit breakers, hand operated and relay operated.

FROGS AND SWITCHES.—The Indianapolis Switch & Frog Co., Springfield, O. Paper, oblong, 8¼ × 3½ ins.; pp. 12; illustrated.

This pamphlet relates to the company's lighter class of track equipment as used for mines, quarry and industrial railways, etc., with rails of 12 to 35 lbs. per yd. Ground switchboards, with and without springs, are included.

WELL PUMPS.—Edward C. Hart & Co., 59 Dearborn St., Chicago. Circular; 8½ × 11 ins.; illustrated.

This sheet describes a pump to be used inside of well with casing 8 ins. or more in diameter. There are several pump runners about 10 ft. apart on a vertical shaft, and the pump combines both screw and centrifugal action.

MACHINE TOOLS.—Niles-Bement-Pond Co., 136 Liberty St., New York. Paper; 9 × 12 ins.; illustrated.

The "Progress Reporter" of the Niles-Bement-Pond Co. is as interesting a presentment of new things in machine tools as we remember having seen It will be worth while for engineers interested in machine tools and shop equipment to arrange for receiving this periodical publication regularly.

CONTROLLERS AND RHEOSTATS.—The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Paper Sheets; 5 × 8 ins.

New things in starting resistances and controllers are exhibited here in the regular form of this company. Tables and dimension diagrams are given where required, as, for example, in the case of machine tool controllers with included resistances.

FAN MOTORS.—The Emerson Electric Mfg. Co., St. Louis, Mo. Paper; 5¼ × 7¾ ins., and 6 × 7¾ ins.; pp. 24 and 47; illustrated.

The smaller pamphlet deals with the Trojan and the larger one with the Emerson alternating current motor fans for desks, house and office use, etc. Particulars are given as to speeds, dimensions, weights, etc., and some of the detail parts are illustrated.

DERAILS.—The Hayes Track Appliance Co., Geneva, N. Y. Paper; 6 × 9 ins.; pp. 8; also circulars 8 × 10½ ins.; illustrated.

These publications relate to the Hayes lifting derail which was described in our columns some time ago. The device is shown in detail, and as applied at switches, turntable pits, etc. A number of testimonials are given and it is said to be in use on over 60 railways.

MECHANICAL STOKERS.—Westinghouse Machine Co., Pittsburg, Pa. Paper; 6¾ × 9 ins.; pp. 62; illustrated.

A most handsome presentation of Roney stokers is offered here. All the questions that a prospective buyer is likely to consider are answered in the text, and an equally forcible argument is contained in illustrations of numerous large power plants using these stokers. The Roney triple roll coal crusher comes in for mention as an accessory.

PNEUMATIC APPLIANCES.—Chicago Pneumatic Tool Co., Fisher Building, Chicago. Paper; 6 × 9 ins.; illustrated.

The December issue of "Something Pneumatic" contains a number of items which will interest people who buy or use pneumatic tools, air compressors or any air appliances. It would seem as though the use of air tools is increasing, not only in extent, but just as much in variety.

SINGLE-PHASE INDUCTION MOTORS.—Stanley Electric Mfg. Co., Pittsfield, Mass. Paper; 8 × 10½ ins.; pp. 12; illustrated.

The single-phase induction motors of this company are built hand-starting in sizes from ¼ to ½-HP., and self-starting in all sizes from ¼ to 15 HP. The self-starting motors use a phase-splitting arrangement in the smaller sizes and a condenser in the larger sizes. Dimension diagrams are given.

WORM AND SPIRAL GEARING.—Morse, Williams & Co., Philadelphia, Pa. Paper; 9 × 6 ins.; pp. 94; illustrated.

Application of the Hindley principle to worm and spiral gearing is thoroughly illustrated here by drawings and views. Tables of dimensions show the range of sizes available to the buyer. Spiral gears are also shown, but their smaller field of use makes these of secondary importance.

RAILWAY SIGNALS.—Union Switch & Signal Co., Pittsburg, Pa. Paper; 6 × 9 ins.; pp. 84; illustrated.

Railway men who have followed the recent discussions concerning the advisability of introducing some form of the train staff system in this country, to increase the safety of our railway traffic, will be interested to read here an excellent description of a new system of apparatus for applying the train staff. There is a good deal of general discussion that will be of interest.

IMPULSE WATER-WHEELS.—Abner Doble Co., San Francisco, Cal. Paper; 7 × 5 and 6 × 9 ins.; illustrated.

The well-known Doble impulse water-wheel is described in a small pamphlet, which also contains tables useful in water power calculations. It is accompanied by a pamphlet giving results of the tests made of a Doble needle nozzle a year ago at the Massachusetts Institute of Technology. These tests show a very perfect velocity distribution in the jet and a very well-sustained efficiency, ranging from 85 to 99% with varying opening.

ELECTRIC MACHINERY.—General Electric Co., Schenectady, N. Y. Serial Bulletins; 8 × 10½ ins.; illustrated.

Recent issues of the General Electric bulletins treat of the following subjects: Continuous current railway switchboards, which shows not only complete assemblages of switchboard panels, but also the more novel of the detail appliances required in this work; Electric railway locomotives, which covers the history of the subject, as far as the General Electric Co. is concerned, from 1894 to the large New York Central locomotive of 1904, and includes size, speed and torque curves for various electric locomotives, and train friction curves as used in the calculations of the company; Air blast transformers; Single-phase motor equipment, as used on the Ballston line, described in our columns some months ago; Belt-driven alternating current generators of smal[illegible]e; Engine-driven alternators of small size; Lightni[illegible]rresters for either low or high voltage direct current w[illegible]al Electric search light projectors.

INSULATED PIPE JOINTS.—S. R. Dress[illegible]lford, Pa. Paper; 4¾ × 6¾ ins.; pp. 68; illustrat[illegible]

These joints are applicable to straight [illegible] bell and socket pipe, and have been used in sever[illegible]s to stop the corrosion of pipe lines by electrolys[illegible] ends of the pipe are enclosed by a sleeve insulat[illegible] them by rubber gaskets and held by a pair of fla[illegible]drawn together by bolts. Various types are show[illegible]th price-lists and other information, and there are [illegible]ptions of cases where these joints have been used.

ELECTRIC MOTORS.—The Electro-Dyna[illegible]o., Bayonne, N. J. Paper; 6 × 9 ins.; three p[illegible]lets, 4 to 8 pages; illustrated.

A new type of direct current motor for [illegible]hine shop driving and general power purposes has bee[illegible]ought out by this company, under the name "Inte[illegible] variable speed motor." It has small pole projection[illegible]ween the main poles, and these auxiliary poles are wo[illegible] in series with the armature for the purpose of giving [illegible]fect commutation under all running conditions. Th[illegible]amphlets show the construction of the motor and illu[illegible]e its application to numerous machine tools.

FRICTION TRANSMISSION.—Rockwood M[illegible] Co., Indianapolis, Ind. Stiff paper; 5 × 9 ins.; [illegible] 84; illustrated.

Friction gearing is as yet so little used that a comprehensive catalogue, such as this one is, should prove very desirable in the libraries of mechanical engineers and designers in all machine work. The book includes very artistic engravings of many styles of friction wheels; a diagram for solving any problem involving peripheral speed, face width, diameter, power and contact pressure; and very full tables of sizes and prices of paper and iron friction wheels.

MERCURY VAPOR LAMPS.—Cooper-Hewitt Electric Co., 220 West 29th St., New York. Paper; 6 × 9 ins.; pp. 26; illustrated.

Mercury vapor lamps, with an efficiency eight times as great as that of incandescent electric lamps, offer a great promise of value in illumination. This booklet would seem to indicate that up to the present they have found their widest use in lighting photographic studios, blue print rooms, etc., and, judging from the testimonials reproduced, they have proved their merit in this service. However, letters from people who use them for general lighting for work as varied as tanneries and pier sheds show that they are not restricted to photographic work.

GAS AND GASOLINE ENGINES.—Jacobson Machine Mfg. Co., Warren, Pa. Paper; 6 × 9½ ins.

The Jacobson engine has its points of novelty mainly on the mechanical side. For example, a removable cylinder bushing is provided, so that the cylinder can be rebored or new bushing substituted with a minimum of trouble. While the engine is of the two-stroke type, it is arranged to give a scavenging effect by admitting only air in the first part of the motion of the inlet valve. The smaller sizes of this engine are built for "hit-or-miss" governing; the larger sizes govern at the admission for closer regulation of speed. In its larger sizes (up to 300 HP.), the engine is built in varous styles as to arrangement and combination of cylinders.

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## TRUNK SEWER.

Salem, Mass.

Sealed proposals for construction of masonry portion of Sections Four (4) and Five (5) North River Trunk Sewer, with brick or reinforced concrete masonry, will be received by the Sewerage Commissioners of Salem, Massachusetts, at their office, City Hall, Salem, until 4 o'clock p. m. of Friday, March 31st, 1905.

All proposals must be made on blank forms furnished by the Engineer, and must be accompanied by a certified check made payable to City of Salem for the sum of One thousand dollars. ($1,000.)

Approximate length of sewer.

| | |
|---|---|
| 4,060 linear feet ............... | 57" sewer. |
| 750 linear feet................ | 52" sewer. |

All excavation and refilling of trench will be done by the City.

Plans, profiles and specifications may be seen and forms of proposal obtained at the office of the Engineer, City Hall, Salem, Massachusetts.

The Commission reserves the right to reject any or all bids.

JOSEPH N. PETERSON,
Chairman.
ERNEST W. BOWDITCH, Engineer. 10-3t

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OFFICE CONSTRUCTING QUARTERMASTER, Room 410, 170 Summer Street, Boston, Mass., March 8, 1905.—Sealed proposals, in triplicate, will be received until 11 o'clock A. M., April 6th, 1905, and then opened in the presence of bidders, for furnishing all material, labor and appliances required for construction of a Submarine Pipe Line from Nut Island to Peddocks Island, Mass.; for a six-inch Water Main on Peddocks Island, and a Post Water Works System at Fort Andrews, Boston Harbor, Mass. Plans, specifications, blank forms and all information will be furnished intending bidders upon application to the undersigned. As a guaranty that plans, etc., removed from office will be returned promptly in good condition, a deposit of five dollars will be required. JOHN E. BAXTER, Major and Quartermaster, U. S. Army. 10-4t

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## CAST-IRON WATER VALVES.

Cleveland, Ohio, March 6, 1905.

Sealed proposals will be received at the office of the Secretary of the Board of Public Service, No. 105 City Hall, until 12.00 o'clock M., March 21, 1905, for furnishing, delivered f. o. b. cars in the City of Cleveland, Ohio, water valves of sizes from 4-inch to 48-inch, inclusive, as may be required during the year 1905, by the Water Works Division of the Department of Public Service of the City of Cleveland, Ohio.

The estimated number of valves required during the year is as follows: 100 4", 150 6", 30 8", 10 10", 10 12", 10 16", 1 20", 1 24", 1 30", 1 36" and 1 48".

Bids will be received separately for valves from 4-inch to 12-inch, inclusive, and valves from 16-inch to 48-inch, inclusive.

Specifications may be seen and blank proposals can be obtained at the office of the Superintendent of Water Works.

Each proposal must contain the full name of the party or parties making the same, and all persons interested therein, and must be accompanied by a certified check for $500.00, made payable to the Board of Public Service of the City of Cleveland, on a solvent bank in this city, as surety that if the proposal be accepted, a contract will be entered into.

No proposal will be entertained unless made on the blanks furnished by the Superintendent of Water Works and delivered at the Office of the Secretary of the Board of Public Service, No 105 City Hall, previous to 12.00 o'clock M. on the day specified.

The City reserves the right to reject any or all bids.

THE BOARD OF PUBLIC SERVICE,
By W. J. SPRINGBORN,
President.
A. R. CALLOW, 10-2t
Secretary the Board of Public Service.

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## FIRE HYDRANTS.

Cleveland, Ohio, March 6, 1905.

Sealed proposals will be received at the office of the Secretary of the Board of Public Service, No. 105 City Hall, until 12.00 o'clock M., March 21, 1905, for furnishing, delivered f. o. b. cars Cleveland, Ohio, such number of 4-inch and 6-inch fire hydrants as may be required by the Water Works Department of the Board of Public Service of the City of Cleveland, during the year 1905.

The estimated number of hydrants required is 100 4-inch and 100 6-inch.

Specifications may be seen and blank proposals can be obtained at the office of the Superintendent of Water Works. Each proposal must contain the full name of the party or parties making the same, and all persons interested therein, and must be accompanied by a certified check for $500.00, payable to the Board of Public Service of the City of Cleveland, on a solvent bank in this City, as surety that if the proposal be accepted a contract will be entered into.

No proposal will be entertained unless made on the blanks furnished by the Superintendent of Water Works and delivered at the Office of the Secretary of the Board of Public Service, No 105 City Hall, previous to 12.00 o'clock on the day specified.

The City reserves the right to reject any or all bids.

THE BOARD OF PUBLIC SERVICE,
By W. J. SPRINGBORN,
President.
A. R. CALLOW, 10-2t
Secretary the Board of Public Service.

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PROPOSALS FOR PORTLAND CEMENT.—Office Isthmian Canal Commission, Washington, D. C., March 14, 1905.—Sealed proposals, in triplicate, will be received at the office of the Purchasing Agent, Isthmian Canal Commission, Washington, D. C., until 10.30 o'clock A. M., April 13, 1905, at which time they will be opened in public for furnishing 10,000 Barrels Portland Cement. Blanks and full information may be obtained from H. J. GALLAGHER, Major, U. S. Army, Purchasing Agent, Isthmian Canal Commission, Washington, D. C. 10-5t

## SITUATIONS OPEN

WANTED.—Young technical graduate (experience unnecessary) preferably a stenographer, as assistant to manager in New York sales office of company making hoisting machinery. Salary, $50 per month. Address "M. 6," Engineering News, New York. 10-tf

WANTED.—First-class heating engineer; one accustomed to making plans and specifications, soliciting and supervising installations. State age, salary wanted and references. Address "O. A. 10," Engineering News, New York. 10-tf

WANTED.—Structural Draftsman. NATIONAL BRIDGE WORKS, Review Ave., Long Island City. 10-1t

For other Proposal Advertisements see pages 35, 36, 37, 38, 40. of Advertisements and Construction News page 92.